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THE CONTEMPORARY

NEIGHBORHOOD SUCCESSION PROCESS

Lessons in the Dynamic of Decay

From the St. Louis Experience

by

James T. Little, Hugh O. Nourse, R. B. Read and Charles L. Leven

with contributions by

Jonathan Mark, Donald Phares and Gary A. Tobin

Institute for Urban and Regional Studies
Washington University
St. Louis, Missouri

E187604

PREFACE

In March of 1972, based on research funded by a grant from the Department of Housing and Urban Development, we presented a study, Urban Decay in St. Louis, subsequently published as National Technical Information Service document PB-209 947. This study sought to explain the process underlying the post-1950 phenomenon of core-city decay and abandonment experienced by many metropolitan areas in the United States, using the St. Louis experience -- an extreme example both for the scale of neighborhood decay and the rapidity with which abandonment, the end result, was achieved -- as a data base.

That original study traced the impact of local and federal policies and developed the arbitrage principle,* which described a dynamic of neighborhood succession impelled by socio-economic forces of considerable complexity. The combined effect of these forces -- in which such earlier identified and more simplistic explanations as age of housing or changing racial character of the population were seen as merely constituent elements -- was found not only to account for the St. Louis experience but indeed made the terminal condition appear as inevitable. Inferentially, it was found that the process could only be checked by altering the policies of relevant jurisdictions in such a way as to abort the operation of arbitrage.

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*"Arbitrage," as a market term, has had two meanings, both of which are subsumed in our present application. For the past century or more it has referred to a situation where the identical commodity commands differing prices in differing markets. This sense of the term has referential application to our present usage in that -- as we shall have occasion to observe -- the same house would have a top value in a high-income neighborhood, a lower value in a "boundary" neighborhood, a yet lower value in a low-income neighborhood.

Except for some highly revealing and confirmatory retrospective studies of rental fluctuations along specific streets over the two decades of change, the evidence presented in that study consisted largely in the analysis of gross demographic data, exhibiting sequential change in census tracts, health districts and -- perhaps most tellingly -- in school populations.

Since that time a series of highly detailed studies, also largely funded by the U. S. Department of Housing and Urban Development, Office of Policy Development and Research, and the National Science Foundation, have been carried through both at Washington University and at University of Missouri-St. Louis, greatly extending the empirical data base, confirming the original hypotheses but also significantly refining them. The work specifically involved in the preparation of this report was funded by the National Science Foundation. Those studies, which are primary sources for the present paper, comprise the attached bibliography. Secondary sources will not be listed here, being fully noted in those primary sourc

The purpose of this paper is to collate the work of the various technical studies and to present, in the most perceptible form and language, its body of evidence and its revealed findings. Each part of this double objective can perhaps be clarified by inserting here a prefatory note.

First, the findings. With some notable exceptions, this large research effort may be seen as confirming with hard evidence what common sense tells us must be true about the factors motivating operation of the post World War II housing market in metropolitan areas. This in itself would not be a pointless procedure, but it is precisely the exceptions that give the exercise its particular <u>raison d'etere</u> and make it pointedly contributory. That is, conventional

wisdom cannot be assumed to identify with accuracy causative factors in social phenomena of this magnitude; and indeed we have found that in some important respects its presumptive base is grievously in error.

Second, the evidence. The research on which this paper is based is of a highly sophisticated nature, so technical that only its most superficial aspects -- the tip of the evidentiary iceberg -- lend themselves to exposition to a lay readership, and that with difficulty. In fact, for almost every measure of the forces effecting neighborhood transition with which this report deals, econometric procedures have been employed, many of the complexities of which cannot be fully presented in a report of this scope. In the original studies the bulk of the text comprises, first, a description of the sources, scope and techniques of the data collection and, second, a detailed account of the analysis to which the data have been subjected. Throughout, however, the source papers are footnoted, and their inspection by interested professional readers is invited.

There is, savingly, another and important dimension of the research design, however, which is fully explicable in lay terms. This is the framework, or thrust of our investigations, and it is precisely here that we make a radical divergence from the traditional literature on the subject. In methodological terms, this framework is embodied in our hypotheses, and these too have undergone considerable refinement since they were first enunciated in Urban Decay in St. Louis. This framework, the nature of its divergence from earlier studies on neighborhood decay, and the findings -- all are given brief statement in the immediately following summary and amplified in Part One. Thus, it is hoped that the present work will prove useful and interesting to both lay and professional readers, while the latter may refer to the primary sources at will.

J.T.L, H.O.N., R.B.R. and C.L.L

St. Louis
May 15, 1975

ACKNOWLEDGMENTS

This report has been the result of the contributions of a great many people who produced the individual research reports and articles which are indicated as source materials in the various sections. The principal investigators of the various research projects which produced these source materials besides myself were James T. Little, Hugh O. Nourse and Murray Weidenbaum. Authorship of source materials also should be attributed to Jonathan Mark, Donald Phares and Gary A. Tobin. We also express our debt without re-citing them to the many people whose contributions to Urban Decay in St. Louis were cited in that study.

A large number of individuals participated in the survey effort which was the basis for an important part of the underlying research. Supervision of various parts of the survey work was provided by Maureen Hughson, Jan Greenberg and Gary Tobin. For research assistance we are heavily indebted to Lawrence Helbers, Jonathan Mark and Otis Jackson. Professors Marvin Cummins and Barry Anderson provided invaluable assistance in dealing with problems of analyzing law enforcement and education, respectively, and Professor Cummins did most of the interviewer training as well.

The number of people outside of Washington University who contributed was very substantial. Foremost were Professors Hugh O. Nourse and Donald Phares of the University of Missouri at St. Louis who, as indicated above, were major participants in the research and in this report. In addition, we would like to acknowledge the assistance and helpful comments from James Cowhig of the National Science Foundation; Edwin Stromberg, Pamela Hussey and Wyndham Clark of the U. S. Department of Housing and Urban Development, Office of Policy Development and Research; Professor George Wendel of St. Louis University; Professor Lowden Wingo of the University of Pennsylvania; Professor Jerome Rothenberg of M.I.T.; Joseph Friedman and Barbara Williams of the Rand Corporation; Eugene Moody of the East-West Gateway Coordinating Council.

Perhaps the largest note of thanks for this report should go to R. B. Read who drafted almost all of it, as he did Urban Decay. His skills as a professional writer surely have made our research efforts much more intelligible, certainly to non-professional readers. Moreover, it should be noted that his contributions far exceeded those of an editor, so that the substantive content of the report reflects his contributions as well.

Finally, it is customary to thank the person who typed the manuscript, in this case Mary Proemsey. We want to indicate that her service in this regard was outstanding and also our special thanks to her for keeping a large number of materials and drafts well organized and always accessible.

As Director of the Institute for Urban and Regional Studies I imagine it is appropriate to note that ultimately I must bear responsibility for the research and this manuscript. To accept the credit for more than a small part, however, would be presumptuous indeed.

C.L.L.

St. Louis
May 15, 1975

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SUMMARY

What is under analysis in this report is the process whereby the housing stock of neighborhoods undergoes, over time, successive reuse by occupants of ever lower income-level. Our primary concerns are with the rate and scale at which this phenomenon has occurred in recent decades and with its continuing operation.

The report has four principal objectives:

1. To identify the motivating forces that impel the succession process. Several hypotheses, evolving largely from our own earlier studies, are advanced to explain the process.

2. To test and validate the hypotheses through the presentation of empirical evidence in support of them. This is the body of the research.

3. To assess, from the findings of the evidence, the implications of the succession process for conferring social benefit or disbenefit.

4. To elicit from all the findings above implications of policy for relevant jurisdictions, local and federal.

Within this frame, the general thrust of the report may be seen as a further and possibly definitive extension of the filtering concept, one which diverges widely from the traditional literature of the subject. Until very recently the analytic focus of investigations of filtering was on the housing itself -- specifically on its age and structural characteristics -- which was seen as moving successively downward on a value scale, the parameters of which were the market price of the housing unit and the income level of its occupants. Also traditionally, the process was regarded as conveying an implicit welfare benefit,

in that construction of new housing for the rich released units of "better" housing for use by the poor.

Our elaboration of the concepts originally suggested by Bailey (in our vocabulary, the arbitrage principle*) is applied to the post-1950 St. Louis experience in our 1972 study. Here the analytic focus of study of the succession process shifts from the characteristics of the housing stock to the characteristics of household preference. Analytically, that is, housing assumes its true status as an inert commodity, the changing value of which is determined by human decisions -- the housing preferences of actual households. The measure of value (which also reveals the pattern of household preferences) then becomes the premium or the discount households are willing to pay for other housing, which inferentially they regard as more or less desirable than their present housing.

In applying this new approach to detailed study of the succession process, it quickly became apparent that people's housing decisions are determined by a complex of factors, among which the structural characteristics of a housing unit and its age comprise but one determinant. Locational attributes at the neighborhood level (significantly, the neighborhood economic class) emerged as prime determinants in household decisions, a finding confirmed by our earlier application of the arbitrage principle, which is essentially a model of neighborhood transition.

From all this we concluded that the classically defined concept of filtering was far too narrowly focused to explain the succession process with adequacy. As a result, major departures of the present study include substitution of the term "housing bundle" -- denoting the constellation of non-structural as well as structural attributes which enter into a household's decision -- for the former "housing," a term limited to the age and structural qualities alone. Since the

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*See footnote, page 1 of preceding Preface.

housing bundle includes attributes beyond the control of individual occupants, whole neighborhoods filter, absolutely and in relative ranking to each other; passive as well as active filtering is experienced, both by households and by neighborhoods. Passive filtering occurs when a change in perceived value is effected through external forces. The reranking brought about by passive filtering may be upward but is more often downward, and a significant finding was that the expectation of passive downranking is a major motivating force in the succession process. Again, it was through these considerations that we were able to elucidate, if not fully resolve, what has stuck as a knotty problem in the literature -- the nature of the subtle relationship between racial change and income-level change as determinants in the process. Changing income-level retains its primacy; but racial change is seen as a harbinger of income change, even to the extent where racial change in adjacent neighborhoods inspires the expectation of local change in income status, so that perceived values can begin to fall within a neighborhood before either racial or income change has actually occurred within its recognized boundaries.

These findings led us to conclude that, far from conferring an inevitable or implicit social benefit, the succession process as it presently operates produces disbenefit of several kinds and for several groups. It creates a permanent disequilibrium in the market for lower-income housing; it disadvantages middle-income black owner-occupants; and it subjects households at all but the highest levels of income to a ravaging market uncertainty. For low-income households this is especially vexing, forcing them to frequent costly moves.

As a corollary of the immediately foregoing, the thrust of our policy recommendations is easily seen: whatever measures can arrest or alter the course or intensity of the succession process is probably salutary, while measures that abet the process in any way are to be avoided. This assessment was confirmed by specific research analyzing the impact of one item of federal policy, the 1966 regulation relaxing neighborhood standards required for issuance of FHA mortgage insurance: we found that whereas this measure facilitated the exodus of higher income whites to new housing in the suburbs, it ultimately worked to the disadvantage of the inmigrants it was designed to aid by speeding the process of neighborhood decay. Further, this policy is seen to have produced a much higher rate of repossessions than in other neighborhoods. Involved in this unfortunate history and an important aspect of the succession process was widespread undermaintenance of devolved units. This should provide a cautionary note for jurisdictions at all levels of government: a major contributor to the terminal stages of decay and abandonment is the failure to provide for maintenance costs in the funding of low-income housing.

The foregoing account presents the substantive framework of the present report. Specifically, it will be found that our research has produced empirical evidence in support of five central hypotheses:

(1) Through their market behavior, households show a preference for housing in neighborhoods with high median incomes and a small proportion of non-whites. Furthermore, households prefer housing away from the path of socio-economic change and inferentially prefer housing in neighborhoods with a small probability of experiencing declines in median income and increases in the number of non-white occupants.

(2) While households show a preference for newer housing, this preference is apparently derived from their desire for larger units and low density neighborhoods.

(3) The arbitrage model of succession is consistent with experience in the St. Louis area. Two distinct patterns of succession are apparent. The first is typified by income decline of neighborhoods without racial change. In such neighborhoods, transition occurs rather slowly, with declines in median income and housing values occurring over a similar lengthy time period. The second and presently more typical succession pattern is associated with racial change. Housing values decline in advance of transition, which when it begins proceeds at an extremely rapid rate. Declines in neighborhood income follow racial succession by only a few years. In this second type of succession, the short run impact of changes in race is greater than changes in income. Our analysis suggests that this results from discounting the socio-economic change in advance of its occurrence. Thus, expectations play a critical role in neighborhood change.

(4) Succession is associated more strongly with socio-economic status of neighborhoods than it is with the age of the housing stock.

(5) It appears that while the change in underwriting standards for FHA insurance implemented in 1966 did produce an increase in mortgage funds to neighborhoods experiencing succession, the primary effect of the change was to make it easier for white families to finance their exit from integrating neighborhoods. At the same time, however, the easier credit terms appear to have increased the incidence of repossessions as well as increasing the speed with which areas went through racial transition.

PART ONE

THE NEIGHBORHOOD SUCCESSION PROCESS

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1. A Perspective View of Recent Change

In the period since 1950 the citizens of St. Louis have shared with residents of other United States metropolitan areas, such as Detroit and Baltimore, a bewildering experience. St. Louisans have observed a wave of neighborhood decay and abandonment, pushing ever westward in a broad band through neighborhoods outward from the central business district, devastating much of the northern half of the city. The havoc left in the wake of this tidal movement, now engulfing the near suburbs in its path, has been largely of a permanent nature. The evacuating families of stable income have removed beyond city taxing jurisdiction leaving behind a population heavily weighted to the old and the poor, producing fiscal problems of such magnitude that city services have inevitably deteriorated. Even demolition of abandoned structures -- at first conducted piecemeal, latterly on an areal basis -- could not proceed without federal assistance. The cost to the city school system has been immense and continuing. In its effort to keep up with the advancing surge of pupil concentrations, the system built 13 new elementary schools, 20 branch elementary schools, 17 elementary additions and one high school between 1950 and 1970 (even as 58 percent of the white population out-migrated); but the pupil-concentration is now at the high-school level, while elementary schools are drastically under-enrolled.

The shock of these huge shifts in the socio-economic character of the city population and their concomitant devastating impact on neighborhoods has under-

standably been difficult for the remnant citizenry to assimilate. They have perceived the phenomenon as a strange new visitation of the times, as bewildering as it has been dismaying. In some ways this conventional perception is not inaccurate, since clearly large-scale urban change of this rapidity is unprecedented. But the true nature of the neighborhood transition cannot be understood, nor the phenomenon adequately confronted by the body politic, without recognition of the fact that underlying it is an old, well-understood process which has been operative for decades.

Throughout the history of the modern city (that is, post-Renaissance) a process known as neighborhood succession has been observable whereby aging residences in once-fashionable districts devolve to occupancy by ever lower income-levels as their market value declines. At the pre-terminal stage of the normal process -- a slow decline extending over a long period -- the one-time mansions have become dilapidating rooming-houses or shabby hotels, while of course the terminal stage is abandonment and demolition.

In the United States, neighborhood succession has traditionally proceeded at a somewhat more rapid rate due to the ready availability of undeveloped land at the perimeter of the urban density and to the propensity of the wealthy to utilize this land for construction of new houses of impressive scale. No doubt this dispersion was accentuated in the U. S. by its technological lead in transport innovation. The prestige allure of the surrounding acreage then made profitable the development of "exclusive" suburbs for the somewhat wealthy, after which the intervening unused land was filled in with new middle-income housing until urban density was achieved. In the meantime the process would have begun anew beyond a

newly established perimeter. This was precisely the pattern of growth in St. Louis: four times between 1822 and 1876 the city limits were extended to incorporate suburban development within the taxable jurisdiction. Many of the city's "private streets" of fine, large homes are remnant suburbs originally located beyond the city limits.

This constant construction not merely of new housing but also of new neighborhoods implies a constant release of housing to the succession process, which was consequently speeded up so that a terminal stage which might take a century or more to achieve in long-established European cities might be reached in the U. S. in four or five decades. Even so, it was an orderly, perceptible process sufficiently extended over time for gradual adjustment both of the housing market and of the taxing jurisdiction. It is also important to emphasize that the decline in market value of the involved structures was closely associated with their age and structural characteristics (size, modernity, soundness, etc.).

The corollary of this process -- neighborhood depletion -- is also not new. As early as the census of 1920 and probably before, the older districts near downtown St. Louis had lost population in the preceding decade, while areas farther away and mostly to the west had gained. In each succeeding decade the ring bounding the area of population decline was pushed further westward from the downtown district, and it was notable that once a district had begun to lose population it continued to do so in subsequent decades. By the mid-1930s the nature and scale of the transition was so apparent that a City Plan Commission study published in 1936 was able to predict with remarkable prescience many aspects of the post-

1950 route, including its fiscal impact. The report noted "the gradual abandonment of the older and central areas," the deterioration of housing concomitant with population loss, the resultant erosion of the tax base and its implication for continuing city services, and predicted that the trend could "continue until the entire city is engulfed."

This rather fulsome warning (which could not have anticipated the inertial integrity of the South Side) seemed not so excessively dire, for the northern half of the city at least, when by 1960 the path of neighborhood depletion had reached the western city limits. By 1970 the adjoining suburbs had begun to experience transition.

What is new, then, in the post-1950 experience is the massive scale of the neighborhood depletion and the swiftness with which it has taken place — in many areas to the terminal point of abandonment. Also new is the lack of adjustment-time for the city to assimilate what has been a massive wrenching of its internal economy. It has, of course, impacted no less hugely on the housing market, but much more intricately since from the outset of the phenomenon the market has been inextricably involved. In a sense, our present studies may be seen as the analysis of a dislocated housing market. For now, however, the resultant social and economic pathologies which have resulted -- and which are also "new" -- can be identified:

1. Large-scale inner-city abandonment, producing acres of unused city land, with comparable loss of property-tax base.

2. Severe difficulties in providing adequate city services for the remnant population.

3. A prevalent temper of uncertainty, producing windfall gains and losses for all income groups of the population and obscuring the parameters of rational planning for governmental entities.

4. The frustration of public policies.

These pathologies are to be seen as consequences of a process of transition which got out of control, a once orderly progression toward obsolescence which became hugely disordered, hugely accelerated, totally out of hand.

The social and economic forces that conspired to produce this fundamental disturbance were identified in our 1972 study, Urban Decay in St. Louis, and their interrelationships described. That causative sequence will now be briefly recounted here.

Perhaps most basic to the situation is an account of the demographic changes within the city in the two decades 1950-1970 which produced a gross mismatch, both quantitative and qualitative, between supply and demand in the housing market. Net outmigration of whites in the period was 411,000 (all figures here are rounded), while net inmigration of blacks was just 18,700.* The white exodus was comprised overwhelmingly of middle- to upper-income families of high educational attainment who had vacated generally sound but aging housing in middle-class neighborhoods. The incoming blacks, on the other hand, were primarily like the great majority of the already resident black population in exhibiting low levels both of education and income.**

These gross figures of population shift alone would indicate a vast oversupply of middle-class housing in the city for which no comparable demand existed, but there were other impelling factors. In the decade 1950-60, well over 10,000 units of slum housing were razed for urban renewal and (discounting for families

*With natural increase, the actual 1970 population showed a decrease from 1950 of 337,500 whites, an increase of 103,000 blacks. The black total subsumes a net out-migration of 4,700 in the decade 1960-70.

**The May 1968 Profiles of Fifty Major American Cities showed that 77 percent of blacks over 25 years old in the St. Louis SMSA lacked a high school diploma and that 86.9 percent of black families lived in a "poverty area" (an ad hoc index using five socio-economic characteristics).

relocated in new public housing) at least 6,000 low-income families (preponderantly black) were cast loose on the housing market. The low-income demand was further augmented, of course, by the remaining slum dwellers (since all families, black and white, will seize an opportunity to escape slum or ghetto conditions) and constantly renewed by those who, having moved, found themselves in rapidly decaying neighborhoods where the slum was being replicated. Given these disparities between supply and demand, it is not surprising that, although 24,600 abandoned housing units had been demolished in St. Louis between 1950 and 1970, vacancies rose from 4,400 to 23,000 in the same period. Clearly, in that interval a constantly renewed surplus of devalued housing had been successively and systematically depleted in a self-feeding process of economic exploitation. But how exactly had it happened? What was the nature of the "system"?

It is the purpose of the present study to answer these questions in a definitive way and with hard evidence. But the pointed significance of the present report can only be fully understood by adding here a few more factors that contributed in a causative way to set the process in motion.

Let us return for a moment to the prosperous white owner of an old but generally sound brick house in a good St. Louis neighborhood. The time is the early 1950s, and he finds the economic rationale for purchasing new housing in the suburbs irresistible. For two decades (the Depression '30s, followed by the war decade) major repairs to his house have been difficult or impossible, and the old plumbing is really in need of extensive renovation; or the wiring, the heating system, the interior walls, etc., or any of these in combination. The little developable land within the city is expensive, whereas new suburban developments are springing up on low-cost land in the near county, easily

accessible to his job by the new expressways under construction or announced. He qualifies for a long-term, low-interest FHA loan (or, if a veteran, a yet more attractive VA loan) with the mortgage federally insured or guaranteed. At the same time his salary has been rising, and because he couldn't purchase durables during the war he is likely to have some money in the bank.

Like any home-owner contemplating sale, he would try to realize a capital gain on his equity, but when he checks recent transfers in his neighborhood he finds that values are rising much slower than he thought, and of course he'd have to bring that plumbing up to snuff to get a good price. A quick calculation shows him that he will actually have improved his situation if he realizes on the sale only enough to make the down payment on the new suburban housing -- whereas he has very considerable margin before that point is reached.

What does not occur to him, of course, is that every conceivable purchaser who could meet the upper range of price he has in mind is in exactly the same situation as himself and finds the inducements to new suburban housing equally irresistible. In this situation, the appropriate market for his house then consists of white families of slightly lower income level who would regard purchase into his neighborhood as an upscale move, and middle-income black families with the same motivation.

A sizeable number of the 1950s evacuees, and a dwindling number into the '60s, were lucky enough to find such buyers (it was the buyers who were found to be unlucky), but they were at all times a minority in the market and the large majority of outmigrating whites ended up selling at much nearer the down-payment price than they had thought possible. For the simple fact was that the middle-class demand was far too small to have any enduring effect on the overall imbalance

in the market. The overwhelming supply was of deteriorating white middle-class housing; the overwhelming demand was from low-income black families. What impact did race itself have on the situation?

The school desegregation decision of 1954 greatly enhanced the mobility of blacks within the inner city, yet the St. Louis housing market was overtly segregated until 1962, covertly so thereafter. This segregated market may have been no more than a logical response of the real estate brokers, but its true impact was nonetheless to concentrate the transition to black occupancy within the moving frontier. Nothing prohibited the individual white owner, desperate for a buyer, from selling to blacks; nor the individual speculator from renting to blacks. The areas identified by the brokers as destined for all-black occupancy, then, were those where the shift was already sufficiently under way for the brokers to regard them as "lost." Thus real estate agents followed rather than led the transition, but their contribution was to concentrate and intensify it.

In the usual pattern, the first blacks to enter the erstwhile white neighborhood were middle-income families who could meet an asking price at or slightly below normal market level. But since on the demand side there were too few such families to sustain that level, vacated houses would stand empty and prices would quickly drop -- eventually to the very low level of the huge demand market that did exist. With real estate agent compliance, massive entry of low-income blacks would ensue; the white exodus would take on a panic character; prices would further plummet; and the initial middle-income purchasers would find that their investment had a swiftly declining market value.

One final jigsaw piece will help to understand why the terminal stage of abandonment was so rapidly reached: This is the maintenance problem. As we have seen, almost 100 percent of the evacuated housing was old (median building year ranged from 1900-09 to 1910-30), of brick construction and, behind an apparently sound facade, typically in need of renovation long deferred. Given softness in the market there was no incentive to make repairs, and given the low income-level of the majority of new occupants there were no funds to do so. At the same time, most of the new occupants represented more intensive use: even single families were typically larger, and in the absence of controls all types of conversion were effected -- single-family houses to multi-family use, small apartment units merged to accommodate large families, etc. With intensified use, serious debilitation typically ensued, whereupon the unit became uninhabitable, although often it continued to be occupied for some time minus running water or heat, or with a collapsing roof. Once evacuated it was subject, in the deteriorating neighborhood, to vandalism -- as were other vacant houses on the block, habitable or not. The owner's only option to recoup a final return of his capital was then cannibalization of salable fixtures (owner-vandalism) or arson, or both. This, of course, is end-stage.

2. The Thrust of the Present Study

Beginning, then, with the massive demographic shifts of the 1950s, we have traced in the foregoing the major contributive factors to the process of neighborhood depletion in St. Louis. This scenario was played out twenty years ago,

yet the process is still continuing. We have learned that once disordered, out of control, the neighborhood succession process has a built-in dynamic which is self-generating and which will continue operating until it is checked by external constraints. The effect of this operative disfunction is that orderly neighborhood succession becomes rampant neighborhood depletion, whereby vacant housing is created only to be exhausted, used up. Thus we have spoken above of neighborhoods being "successively and systematically" depleted in an ever-pushing wave. That self-generating "system" we call arbitrage, * and the purpose of the present study is to demonstrate the reality of its continuing operation in the St. Louis area twenty-five years after the causative factors set it in motion. It is significant that whereas our 1972 study, describing the inception and pre-1970 operation of the process, was statistically based on census tracts and health districts within St. Louis City, with but a small fraction of evidence from the near suburbs in our present study the emphasis of the data base is shifted: in addition to more data on city neighborhoods, very substantial evidence also is available for suburban areas.

The reader will find that his progress through the following discussion will be facilitated by bearing in mind a basic terminology. The traditional, orderly process of neighborhood succession was classically called "filtering down" or simply "filtering." We show that in light of the radical socio-economic morphology of recent decades the filtering concept must be largely expanded and restated. Specifically, we must identify and deal with the disorderly, exhaustive and self-generating process of neighborhood depletion. Our restatement of filtering serves to explain and demonstrate significant elements in the dynamic operation of arbi-

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*See footnote, page 1 of Preface.

trage, while conversely to elucidate arbitrage serves to clarify the newly-identified manifestations of filtering. In our usage, then, the terms are closely interrelated: arbitrage describes the overall process, while the various kinds of filtering are to be seen as attributes of this whole.

3. Filtering: Development of the Concept

The neighborhood succession process has long been recognized in the literature of urban economics, and since our present restatement of its principles involves not only an extension but also a synthesis of earlier definitions, it will be useful to make a brief review of the concept's development.

Writing in the 1920s, Richard M. Hurd made the point, highly relevant to our discussion, that socio-economic characteristics of the neighborhood determine the value of housing to a much greater degree than do its structural characteristics. He argued that a house costing $50,000 to build would sell for much less than that if surrounded by $25,000 houses, while conversely a $25,000 house would have a market value considerably above that if it were in a neighborhood of houses costing twice as much to build.

In the '30s, Homer Hoyt extended this notion in his study of neighborhood succession. He showed that values decline as a function of lowering socio-economic level of residents. He also demonstrated that the introduction of blacks into a neighborhood at first raised prices (they were paying a prestige premium), but that subsequently prices declined as whites evacuated. In 1939 he systematized these ideas into a sector theory of neighborhood growth in The Structure and Growth of Residential Neighborhoods in American Cities. Hoyt's work was prestigious

and had enduring impact, but unfortunately it was not the aforementioned theories that prevailed. Hoyt was the first to use filtering as an analytic principle and he stated the concept in its traditional terms of structural characteristics. Specifically, he saw neighborhoods filtering down as a function of the age of the housing. It was this notion -- probably because of its simplistic appeal -- that proved to have most lasting strength in the subsequent literature. A decade later Richard Ratcliff, without sophisticating the concept of the process itself, attached a social value to filtering by elaborating the idea that construction of new housing, by releasing units to the filtering process, makes better housing available to the poor. It is important to note that this view of filtering as a socially beneficent mechanism expressly underlay federal housing strategies of the postwar period.

In the following two postwar decades, while the Hoyt-Ratcliff concept remained officially operative as a theoretic rationale for FHA subsidies extended to purchasers of new suburban housing, it came under academic criticism, notably by Lowry, and the impact of turbulent social change. It was early apparent that housing made available to newly urbanized, low-income blacks was frequently subject to rapid deterioration and abandonment, and this brought into question the notion that filtering implicitly bestows a social good. In response to this objection and to other, equally obvious discrepancies having to do with inequalities of income in supply and demand, in recent years William Grigsby sought to repair the deficiency in the filtering concept by firmly attaching to it the notio of <u>quality</u>: that is, for filtering to occur the housing unit, while declining in price, must represent a quality improvement for the succeeding occupant.

Wallace Smith then refined Grigsby's statement and gave the classic filtering concept its most elegant definition: ". . . a unit filters only if it declines

more in price than in structural quality." It is worth considering this definition in some detail.

Smith's deft formula excludes moves that are induced by changes in household income, while it includes variations in space. As put more fully by Smith himself:

> "Filtering (changes in house prices and rents) must be measured while holding income, quality and space per person constant; or, in a more relaxed form, that filtering occurs only when values decline more rapidly than quality, so that families can obtain either higher quality or more space at the same price, or the same quality and space at a lower price than formerly."*

It will be noted that all these distinctions are subsumed in the elegant definition cited in the paragraph preceding the quotation. More importantly, however, it must also be noted that the emphasis in Smith remains on the housing unit itself, and specifically on its structural characteristics. It is from these two points of focus, basic in the literature of filtering, that our work radically diverges. We now trace the course of that divergence.

It will be noted that, following Hoyt's largely forgotten 1933 analysis of the price sequence resulting from black entry into a neighborhood, any accounting of racial change on housing values in the central city is missing from the evolving theory of filtering as reviewed above. The analytic literature dealing with racial impact has a separate and more recent history, since rapid demographic change is a World War II and postwar phenomenon, and it is one vexed with an almost insurmountable difficulty -- namely, the close interrelation of low income and black occupancy and the consequent difficulty of separating their impact

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*Smith, Wallace F., "Filtering and Neighborhood Change," Research Report No. 24 (Berkeley Institute for Urban and Regional Development, University of California).

statistically. That is, given the low socio-economic status of the rural blacks massively migrating into the central cities, it becomes almost impossible statistically to isolate race from income-level in attempting to analyse changing values in the housing market. Some insights can be garnered from observations of the movements of low-income whites and of high-income blacks; but neither of these populations is statistically large enough to influence the supply/demand situation significantly (although, as we shall have occasion to note again, the very paucity of middle-class blacks has had some inverse effects). The very large and hence statistically operative populations involved have been upper-income whites able to afford new housing and low-income blacks as the significant demand market for the supply of vacated housing.

Thus the question of racial impact was more clouded than clarified in much subsequent work. But Martin Bailey, while addressing particular zoning problems in urban renewal, suggested a model (or analytic method) of neighborhood transitio that provided a new approach to the problem through a switch in focus. Whereas traditional filtering theory views the housing itself as moving down to successive levels of supply price, Bailey saw the process as one reflecting the decisions of moving households through demand as well as supply. Bailey's principle specifical describes market price fluctuations between central city neighborhoods in transition, where adjoining neighborhoods are typically of different racial and/or income character. Bailey's work was directly focused on racial impact in neighborhood change, in both its market and social expressions: he was seeking a model to explain blockbusting in segregated housing markets. Despite the particular thrust of his analysis, Bailey's model has wider application, since housing for the poor in an open market is also spatially segregated and fixed in supply.

Both the poor and lower middle-income groups are excluded from new housing because building codes push its price beyond their reach. For both these groups, then, the only shelter offered from the private sector is the existing housing stock. The market separation (analogous to segregation) is further intensified by the observed inclination of people to live among others like themselves -- of similar income, race and ethnic background -- while at the same time all groups aspire to upward mobility (in housing terms, to occupy "better housing," which, as we shall see, includes a high value-component of neighborhood character).

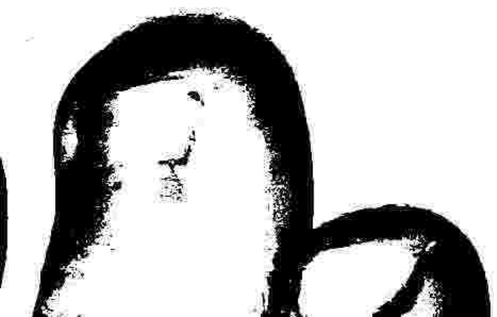
To illustrate, let us hypothesize a city in which all the houses are identical but are occupied, in a geographic separation, by two distinct groups of people, rich and poor. The rich, whose incomes are high but also have a range from lowest to highest, prefer to live in exclusive neighborhoods with a majority of other high-income families. The poor, whose incomes also exhibit a range from low to high, feel most "at home" among others of their approximate income level, but at the same time their desire to improve their housing makes them prefer to live as close as possible to the exclusive neighborhoods of the rich. The situation produces four prices for property. In descending value, there is the price for the rich deep within the exclusive neighborhood; next, one for the rich in neighborhoods adjoining the poor sector; next, one for the poor in the adjoining boundary neighborhoods; and finally one for the poor deep within the poor neighborhood.

The double boundary between the two basic markets moves one way or the other depending on whether it is profitable to change boundary property from high-income

to low-income occupancy or vice versa. Prices in turn depend upon the available stock of housing relative to growth in the number of households in each group.

Thus, we need to account for changing demand through marriage, birth and death relative to changing supply which occurs via demolition and construction <u>for each group.</u> It is here that the gross causative changes we traced in the earlier section have their impact: in demand terms, we noted the huge loss of white upper-income population and the even larger gain in the proportion of low-income blacks in the total population; in supply terms, we observed the accelerating evacuation of aging upper-income housing in white neighborhoods, the decreasing supply due to demolition of low-income black housing, which intensified the black demand. The pressure of this low-income demand, in the absence of other significant demand makes the conversion of housing for the rich to housing for the poor ultimately the only profitable market alternative.

As the boundary moves into the erstwhile rich neighborhood, housing formerly worth a premium for location adjoining the high-income families no longer elicits that extra value; the income associated with the property declines, placing downward pressure on property values in the immediate area. Although it is true that there is no necessity for property to deteriorate with age, if income falls there will be fewer resources available for normal repairs. Maintenance is reduced because other property costs such as taxes and mortgage payments remain fixed. In a period of inflation the decrease in property value may not be absolute, but in any case value declines relative to the cost of new housing. Declining maintenance inexorably leads to deterioration in the housing quality.



The end of this cycle is abandoned housing. The boundary is pushed too far, driving the price of housing within the exclusively poor neighborhood so low that it is no longer feasible to meet building code standards or such fixed costs as taxes and mortgage payments. The least-cost solution is then abandonment of the property.

If we incorporate racial factors into this market process, it is altered only slightly. Prices on the white (high-income) side of the transition boundary, after an initial rise, eventually fall to a point equal or below those in exclusively black (low-income) neighborhoods. If the boundary impinges too deeply or too rapidly within the erstwhile white neighborhood, then at some point behind it there would no longer exist any demand for exclusively black housing.

It is this extended application of Bailey's model that we call arbitrage,* and we must now consider its several implications for the filtering concept whose evolution we have been tracing. In the first place, as noted immediately above, it provides us with a new method of approach in our effort to isolate the impact of racial change on housing values from the closely related impact of change in income-level. In the second place, it provides us with an analytic tool which implicitly encompasses the transition of whole neighborhoods from one income-level to another. The classic filtering analysis, on the other hand, was limited to individual units of housing, or to groups of housing units of like age and structural characteristics. Finally, and by far most importantly, it reverses the focus of analysis from the characteristics of the housing stock itself (a supply

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*The term itself was first used in our 1972 Urban Decay in St. Louis, followed by Hugh O. Nourse's own 1973 book, The Effect of Public Policy on Housing Markets (D. C. Heath, Lexington, Mass).

model) to the factors motivating the decisions of moving households (a demand model). This last consideration led us to a complete restructuring and extensi of the filtering concept. It is these ideas we now consider.

4. Household Preferences

When people buy or rent a dwelling unit, they are purchasing the right to th use of that unit. This use represents a whole constellation of characteristics associated not solely with the structure itself but also with public services offered in the community, accessibility to shops, jobs, recreation facilities, churches, etc., and the socio-economic status of neighbors and their housing. Therefore, the price anyone will be willing to pay for a particular dwelling unit depends on multiple considerations: structural qualities such as soundness, size modernity; accessibility; scope and quality of public services; and the several characteristics that define neighborhood quality. Collectively, we call all thes characteristics of the property the housing bundle.

At any point in time a household places a value on the dwelling unit it currently occupies, and that value represents the family's appraisal of the collective value of all the elements of its housing bundle. Further, however, the estimated value depends not solely on the characteristics associated with the property today, but also on the expected future status of those character-istics. Property value, then, is the present value of the future stream of services expected from the property. Thus, expectations play a significant role in assumed property values and must be taken into account. Inferentially, the housing bundle includes a component of expectation. Let us now consider in a general way how the housing bundle concept generates mobility in the housing market.

The market for dwelling units is the whole array of units occupied or vacant, but any particular household, contemplating a move, will consider only those units that represent fairly close alternatives to the unit it presently occupies and will compare the prices of those alternative dwellings with the value it places on its own. A household is motivated to move by either of two considerations. One is where the character of the household has changed: the size or composition of the family has altered, or its income has diminished or increased, either of which changes the household's most preferred housing bundle. The other is where, without any change in the family's characteristics, the household would move if it could obtain a preferred housing bundle within the same price as its present dwelling. In any case, given the considerable costs of moving (transportation charges, agents' fees, closing costs and possible mortgage points), for the move to be attractive the price differential between similar units of housing need not be zero but also may not be more than the costs of moving.

Now it is important to note that in both kinds of moves described above the household has increased its utility. We may then postulate that a household will move only if the whole bundle of characteristics (at the given price) is preferred; that is, if it becomes better off as a result. This idea clearly carries a welfare connotation, and it becomes germane to contrast it with the old filtering concept which was regarded as implying a social benefit. We return to Smith's definition as the most eligible statement of the traditional concept: "a unit filters only if it declines more in price than in structural quality." The implicit social benefit here is clear: the incoming household has received a windfall gain. But if we look at this definition from the standpoint of household

preference, we immediately see that it is inadequate even in its own terms, because no objective standard of structural quality can be assumed to match the structural preferences of any particular household, But this is the least of th formula's inadequacies: regarded from the standpoint of the preferred housing bundle, we see that only one out of many measures of housing quality has been accounted for (and that inadequately, in the sense described above). All the locational and public-service attributes of the preference bundle are disregarde with the result that for the in-moving household the overall change in housing utility may represent a disbenefit even though it has improved the structural quality of its housing at same or less cost.

An example will make clear that these distinctions, far from being sophistical, have sharp reality. This is the Pruitt-Igoe fiasco in public housing, a massively misbegotten project familiar to all St. Louisans. For the more than 10,000 former slum dwellers who were relocated in these concrete high-rise apartments outfitted with modern appliances and facilities, the move undeniably represented a vast improvement in the structural quality of their housing, and at the same or less cost. But such provision as was made for the other attributes of th housing bundle was not sufficient to provide a satisfactory total bundle, once other alternatives for the poor emerged out of the progressive softening of the St. Louis housing market. Initially there were reasonably adequate shopping fac ities nearby, the surrounding demolitions and plummeting social conditions quickl resulted in commercial abandonments that left the concentration of residents as isolated as if they occupied an offshore island. But it was the demographic attr butes of the housing bundle that proved most troublesome and seemed even to have

been desirably manipulated. Indiscriminately assigned to units among the nuclear low-income families with children who were striving to improve their living situation were the social outcasts of the black ghetto. As a neighborhood environment, Pruitt-Igoe, even early in its history,could not conceivably be regarded as the preferred housing bundle of anybody; it became the kind of neighborhood any household would immediately seek to escape. In terms of the conferral of social benefit, Pruitt-Igoe ended as the housing equivalent of committing a guiltless indigent to prison on the rationale that there he will receive shelter and three squares a day. Centrally involved in the fiscal aspects of the Pruitt-Igoe disaster was the failure to provide adequate funds for maintenance, but that is another story; here our focus is on the welfare implications of the housing bundle.

Pruitt-Igoe was, of course, a very special case, highly concentrated and without the impact of market factors; but the fundamental inadequacy of the old filtering concept, so glaringly apparent here, is no less observable in the open housing market. To see this with clarity, we must now relate our household preference bundle to the market.

We noted above that for mobility to occur in the market (that is, for a move to be attractive to a household) the price differential, including moving costs between the bundles of housing,must not exceed the premium/discount the household has determined. Extending this, we see that in the final analysis market prices depend on the desirability of the unit to households and that the unit's desirability, in turn, depends on the households' preference for particular structural, access, neighborhood and local government characteristics. However, the characteristics of at least two of these dimensions of the bundle -- neighborhood and local

government -- depend on <u>who lives where</u>, and this perception involves us in a reciprocal effect, or relationship, between moving and non-moving households. We find that movement by a relatively small number of households in response to changes in their family composition or real income could generate movement by a much larger number of households in response to the cumulative effect of the inmigrants on the neighborhood character and local public services. Further, these changes would be focused on a few neighborhoods, leading to highly localized rapid rates of turnover and price change. Stated as a principle: transition by individual households, particularly in a falling market, can inspire and accelerate neighborhood transition.

Now we are ready to reexamine the welfare implications of filtering in the open market. We noted above that households will move voluntarily only if, at the given price, they prefer the whole housing bundle of the new location, and that this implied a social benefit in that they had bettered their situation, at least temporarily. But what can be said of the well being of the non-moving households? If, as we have postulated, the impact of the incoming households is to initiate a cycle of falling values, then the socio-economic characteristics of the neighborhood will be downgraded and, ultimately, the quality of public services is likely to decline as well. Through no action of their own, the remaining original residents of the neighborhood will have experienced a disbenefit as their housing bundle changes. As the cycle continues over time, of course, the successive inmigrants will each, in turn, experience a similar disbenefit. We observe that the housing bundle of the inmigrants has been upgraded, that of the

residents downgraded; also we observe that the filtering taking place is of two kinds, active and passive. Here the truly inert nature of the housing stock itself is fully revealed, and at the same time the fundamental failure of the classical filtering concept as a mechanism for social benefit.

The only perspective from which the welfare implications of the household succession process can be rationally and adequately assessed is that of household preference, and it must encompass the entire housing bundle. Once this postulate is accepted, we are in the position where it is households, not housing, that filter and we must formulate a new set of definitions.

5. Filtering Redefined

In extending the filtering concept to encompass changes in households' utility, we encounter a problem in terminology that is essentially semantic in nature, but for all that nonetheless real. That is, implicit in the idea of filtering is the sense of <u>downward</u> movement, whereas we must now account for upward as well as downward changes -- both of housing itself as expressed in market price and of households' utility as expressed in the realization of housing preferences or in the assumed value of the unit's housing bundle.

The problem is not merely that nothing can properly be said to "filter up," but that to continue to use the word "filtering" to describe these broad extensions of the concept involves us in a wrenching distortion of a term which is firmly fixed in the literature to denote a specific process: namely, the sequential reuse of housing by successively lower-income households.

It would appear wise to preserve that original thrust of the term in our use, but with the difference that whereas Grigsby and Smith, in their redefinitions of Hoyt, firmly attached the notion of sustained quality, we now further extend the meaning to include the notion of "housing" as representing a bundle of utility values. Thus we arrive at a new definition for filtering, by which we mean to restate in a definitive way the classic notion of household succession:

> Filtering occurs when a given bundle of housing characteristics becomes available at a lower market price.

We would prefer not to cloud this traditional focus of the term by using it to denote the various extensions of the process which are identified and elucidated here, although that usage was followed in the various monographs and studies upon which the present report is based. Here, whenever possible, we will speak of various kinds of "downranking" and "upranking" (collectively, "reranking"), both active and passive, of housing, of households and of neighborhoods. It is to be understood, however, that all of these represent identified configurations of the general construct "filtering" -- because, of course, the term also connotes the total succession process. From time to time, then, we will use the term "filtering" in what is semantically an illicit sense, applying it to upward movement, to households, to neighborhoods, both as a means of sustaining in the reader's mind the general framework of our discussion and in order to avoid awkward terminology. What is important to remember throughout the remainder of this report is that whenever the terms "reranking," "upranking" and "downranking" are used, the term "filtering" -- in its broadest sense as connoting the whole succession process -- could be substituted.

We have already restated above, in terms of the housing bundle, the classic filtering down of housing units, and we are now ready to define the other manifestations of the succession process in terms of reranking.

> A household experiences upranking if, independently of changes in its real income, its housing bundle is changed to a more preferred bundle. A household experiences downranking if the change is to a less preferred housing bundle.

Based on these definitions of household filtering, we may now define active and passive filtering:

> Active reranking occurs when the household changes its housing bundle by moving to a different unit. Passive reranking occurs when the household does not move but experiences a change in its housing bundle nonetheless.

At this point it is worth noting that it is the perceived possibility of passive reranking that generates expectation, which plays an important role in the succession process. We will shortly return to an elaboration of this function.

The definitions stated above are rendered operational for analysis of the housing market by the fact that prices reflect the desirability of housing units. At any point in time, prices will generally rank units in terms of households' preferences in which, as we shall see, neighborhood characteristics weigh heavily. It is this fact that allows us to tie together transition and price changes.

6. The Arbitrage Process

Let us now consider the arbitrage process as the way in which household preferences are systematized as housing market prices. We return to our adjoin-

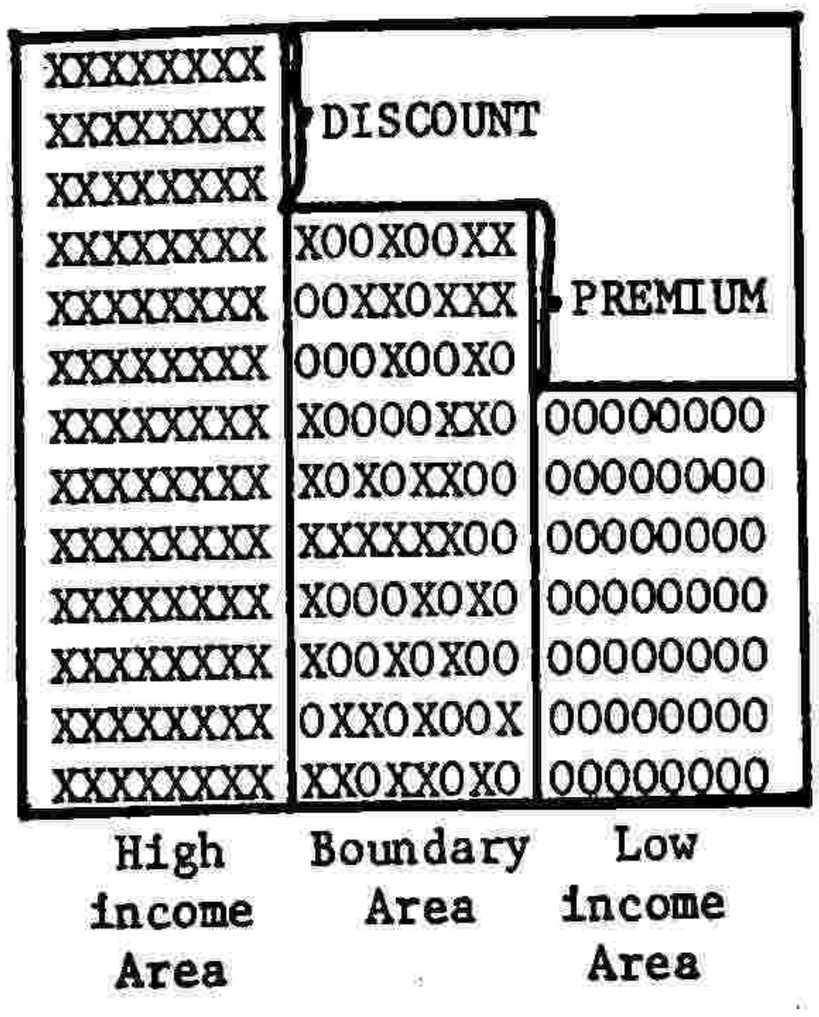
ing neighborhoods grouped into high-income, low-income and boundary areas; and we define high-income families as those who can afford newly-constructed housing, low-income families as those who cannot. As before, we note that the highest prices will obtain deep within the upper-income neighborhood, the lowest prices deep within the low-income neighborhood. We also note that the high-income families will insist on a discount for living on the boundary, while the low-income families will be willing to pay a premium for a boundary unit. These price differentials are assumed to express all household preferences, as we have defined them above.

Figure 1 diagrams the general configuration of this dispostion of housing between the high-income and low-income populations. In the boundary area, it will be noted that the two kinds of occupancy are fairly randomly dispersed, and it may be inferred that the larger, better houses will be occupied by the less rich who can outbid the better-off poor. This ability of the rich to outbid the poor explains, of course, why no poor live in the exclusively rich neighborhood. The scheme thus accords with the four levels of housing price we noted previously and we have, in effect, four submarkets.

So long as the housing supply remains a reasonably close match to the demand in each of these submarkets, the market may be said to be in equilibrium, a condition under which arbitrage remains inoperative. But anything that disturbs the supply/demand balance in any of the submarkets will initiate price changes that cause the boundary to shift, impacting on all the related submarkets. Population increase on the high-income side, for example, will inspire new construction, creating vacancies that reduce demand for the high-income units, thus driving down the boundary price for high-income families. Population increase on

Figure 1

Diagram of Pre-Arbitrage Dispersal
of Occupancy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the low-income side, however, will have an opposite effect on the boundary price; since there is no recourse to new construction, families must double up; increased demand pushes prices upward within the low-income neighborhood and the premium paid for boundary units increases. This widening gap in boundary prices makes it profitable to shift occupancy from high-income to low-income households, and at this point arbitrage comes into play.

Supply factors can equally disturb the balance. Demolition of low-income housing in order to build highways or high-income housing, as in urban renewal, will generate a shortage of housing for low-income families. With the price of housing for the poor rising as a consequence, it would become profitable to shift housing from high-income to low-income occupancy. This movement, in turn, would reduce the upper-income housing but only temporarily, since new construction would respond to the increased high-income demand. Another factor affecting the supply side of the balance is rising absolute income: here the shift is initiated on the upper-income side as the increased income inspires moves to new housing, reducing demand within the rich neighborhood and lowering prices of the better homes within the boundary area. It would then be profitable to arbitrage these boundary units to low-income use.

It is understood, of course, that the distribution of housing and incomes in the argument presented above is as oversimplified as the diagram in Figure 1. In reality, income groups do not neatly divide themselves into four categories but rather cluster at points along a continuum from lowest to highest. The effect of this is to create additional submarkets, so that there may exist several boumdary areas, some of them so finely graded as to be unidentifiable.

Here we are describing the ways in which housing price changes are initiated, causing boundaries to shift and bringing arbitrage into play, and upon a little reflection it will be seen that to inject the racial factor into the situation alters the process very little at this point. That is, given the general socio-economic characteristics of the white and black populations in the inner city, it is almost possible to repeat the analysis given above, merely substituting "white" for "high-income" and "black" for "low-income."

The slight additional factor, of course, is the already-noted fact that families commonly prefer to live among families of their own racial and ethnic identity, (heavily reinforced by the segregated market), and its major impact would be the creation of additional submarkets, additional boundary areas. These are not hypothetical, but very real: that is, there indeed exist income-level boundaries in both all-white and all-black areas; and there exist white slums as well as black. But statistically these are minor submarkets, while the major market configuration is typically as stated earlier, but with race as a further qualification: white upper middle-income to white lower middle-income to black middle-income to black lower-income. The boundaries between white and black neighborhoods will then shift in response to the same factors disturbing the balance of supply and demand as identified above.

Race has another kind of impact, however, and it is one that assumes increasing force in later stages of the process. We have noted that the value households put on their housing includes the expected future stream of value and that, mirroring this, the housing bundle includes a component of expectation.

Based on the perception that, statistically, "black" is to be equated with "low-income," a shifting boundary between white and black neighborhoods that results in black entry into a formerly all-white area will, then, impact on the expectation component of the area's housing bundles and their perceived value. Exploring this development in more detail, we discover some unexpected results.

7. Expectation

The important role that expectation plays in the householder's assessment of his property's value is due to the fact that it represents his estimate of the likelihood or unlikelihood that his bundle of housing may be subject to passive reranking. Because this estimate is made in a highly uncertain environment, the householder is particularly sensitive to signs and portents -- to "changes in the wind."

His housing bundle may be passively upranked, the kind of windfall gain that occurred to pre-1960 inmigrants to Clayton, for example: they could not know that local development of a secondary central business district, providing a large tax base, was about to enhance the public-sector element of their housing bundle very significantly. Similar external events might as easily downrank his bundle -- capricious zoning changes, for example construction of an airport nearby. But passive filtering of this kind is, of course, random and unpredictable; the causative events can enter the householder's calculation of probability only <u>after the fact</u>.

For householders in some situations, the sum of perceptible probabilities could suggest that his housing bundle would be subject to passive upranking -- those so situated as to take seriously the canon of conventional optimism. But

for the inner-city householder of the postwar decades, the most likely prospect was that, through no action of his own, his housing unit might experience down-ranking.

All the other elements of the housing bundle exert some measure of effect on the expectation component. Most easily calculable is the future value of the structural characteristics -- soundness, modernity, etc. -- whereas all the locational attributes are subject to uncertainty. Among these latter, however, it is observable that, in the normal course, the factors of access and local government change slowly. On the other hand, it is equally apparent that neighborhood characteristics -- income-level and racial composition -- can alter very swiftly. It is, then, to trends and developments -- "changes in the wind" -- that may alter the neighborhood characteristics of his housing bundle that the householder reacts with the greatest sensitivity.

Now it is not difficult to superimpose on the theoretic schema of arbitrage, as we have outlined it above, the massive dislocations in housing supply and demand of the 1950s which we traced in the early pages of this section and to see what impact those events would have on the expectations of householders in the inner city. In briefest recapitulation, a mismatch between supply and demand initiates the price changes which cause the boundary to shift between neighborhoods of different racial or income composition. In the 1950s such a mismatch was produced on a massive scale. At that time, many economic factors conspired to make the purchase of newly constructed housing in the suburbs irresistibly attractive to upper-income white families. This produced a constant release of large numbers of middle- to upper-income dwelling units to the housing supply. At the same time, population increase among low-income blacks (both natural and inmigrant), coupled with extensive demolition of slum areas, produced a large increase in the demand for low-income housing. Thus, demand and supply were grossly mismatched.

The only appropriate demand that existed for the oversupply of white upper-income housing was that provided by upper-income blacks (since middle-income whites could also afford to purchase and had access to new construction). As we have seen, the oversupply of white housing alone would cause values to fall within the white neighborhoods, but in market terms the distress situation of these units was intensified (increasingly so over time) by the lack of an appropriate demand. The sequence was then inevitable. The initial drop in values brought upper-income blacks across the boundary; continuing decline in values in that newly-established boundary brought ever lower-income blacks into the immediate area even as the front of upper-income blacks moved deeper into the heart of the white neighborhood. Moreover, where real estate agents failed to distinguish differing abilities to pay among their black clientele, the deterioration in income level in changing neighborhoods was accelerated. The cycle was repeated in an ever-moving frontier of transition. But this is not the entire dynamic, for expectation soon entered as a functional element.

Observing the apparent pattern of neighborhood change, householders began to devalue their property in an effort to "get out" even <u>before</u> the boundary had shifted. That is, in neighborhoods that lay across the apparent path of transition <u>expectation alone brought a drop in values</u>. The effect of this, of course, was to accelerate the entire process. In the housing market, expectation — like prophecy — is frequently self-fulfilling.

In the very recent manifestations of arbitrage in the St. Louis area which are documented in the following section, we will observe this same operation of expectation continuing twenty-five years later. In the interim, many of the

impelling factors which seemed to validate this item of conventional wisdom no longer obtain; yet the dynamic continues to operate, no longer driven by real market forces but by expectation alone. Since the mid-1960s, inmigration of rural blacks to the St. Louis SMSA has dwindled to nothing; the decade 1960-70 brought a net out-migration of blacks from St. Louis City to the County of some 5,000 blacks; the rate of black natural increase has slowed; there has long existed a surplus of low-cost housing per se (although a shortage of quality low-cost housing); and the path of transition is dispersing into the near County, where the housing itself exhibits very different structural characteristics from the stock that was depleted in the 1950s and 1960s. In short, a continuing dynamic of expectation alone is now activating the passive downranking of households and the filtering down of housing stock even of recent construction.

We have been tracing here the role of expectation as a motivating force in householder decisions, but this is only half the story. To lenders whose business is the financing of housing purchases, expectation is the very substance of daily operation; their calculations of probability have immediate and overt effect on the market. We now consider this factor.

8. Financing

Since housing transfers rarely proceed on a cash basis, the role of lenders is all-pervasive in the market and their assessment of future values is of direct importance. Thus, although lenders do not set values or prices, their control of the money required to effectuate the value householders place on their property becomes another market factor -- like shifts in supply and demand -- impacting on prices. In this way, a householder's first realization that the market value of

his property is declining often comes when the purchaser he has found at his asking price is unable to obtain financing at that price-level: the householder must then decide whether to become the lender himself, assuming the mortgage risk, or lower his asking price.

Lenders' perceptions of probability are from the outset areal in nature; they too give heavy weight to the future neighborhood characteristics of the housing bundle. If they see a high probability that a neighborhood's income-level will fall or that its racial composition will increasingly shift to black occupancy, their projections of property values will fall. Their response to lowered estimates of future market values (in the absence of mortgage insurance) would then be more restrictive terms -- larger down payments, shorter-term loans and stronger assurances as to the financial soundness of the borrower. Not to tighten the loan in these ways would be to increase their risk of loss, since their possible return in the event of foreclosure would be less. The lender's aim is to guarantee that, at any time during the term of the mortgage, the market value of the unit exceeds the outstanding debt. When lenders perceive a probability of continually falling values in a neighborhood, they will refuse further lending in the area, for this is the only way in which they can be certain of avoiding loss. This withdrawal of financing results, of course, in the inability to sell houses in the neighborhood, so that vacant units stand idle and subject to vandalism for long periods, producing yet steeper declines in values, sometimes virtually to zero.

Centrally involved in this sequence, and directly associated with lowering income-levels, is the deterioration of maintenance we have noted earlier: it contributes both to the fall in values and to loss of lender confidence. New owner-occupants of lower income have less reserves for upkeep (often, in Section

235 transfers, it was found that the incoming family's resources had been pushed to the very limit simply to effect the takeover), and structural deterioration ensues. Typically, the same result ensues when owners opt to rent out their property in order to avoid selling at a loss: they lack experience in tenant selection or in maintenance procedures for renters, and they have no access to cost-saving maintenance techniques. Renting the unit soon becomes a losing operation and in desperation the owner finally sells to a real estate operator at a loss simply in order to be out from under the investment burden.

In the above we have been considering the maintenance problems of down-ranked middle-income housing, but it is clear that for the low-income units which the inmigrants have vacated the identical problems of insufficient funds obtain, but in more critical degree. For these units, then, the decline in value becomes precipitous, the chute to abandonment swift.

When the syndrome of falling income,falling prices and structural neglect becomes manifest in a neighborhood, such institutional lenders as banks and savings and loan associations will no longer invest in the area. At this point the individual investor becomes the sole source of financing for sales to owner-occupants; but in actuality most sales are to speculators whose typical operation is to extract a quick return in under-maintained rentals.

The neighborhood component's heavy weighting in the housing bundle is made particularly clear by the 1960s practise of the Federal Home Loan Bank. While admittedly fiscal prudence may have dictated such action, its examiners, up to 1970, reportedly "red-lined" those postal zip code areas in which the syndrome of falling values described above had been observed: in order to preserve the semblance of an open market, the device resorted to was for the examiners to

require higher reserves for mortgages in these areas. The stipulated higher reserves resulted in few if any loans being made within the area. In St. Louis it happened that in several cases "private streets" of fine old mansions in good repair existed within these postal zones (surrounded, of course, by rapidly decaying blocks). The prices of these fine homes became hugely devalued: twenty-room residences with marble-floored ballrooms could be had for $25,000. And stably-employed, low-risk purchasers were available. Despite these high loan qualifications, however, neither the candidate buyer nor the complaisant seller could prevail against the areal blanket-effect of the red-lining. The transfer could be accomplished only with very large cash equity and on short terms with payment of discounts, or with a loan using collateral other than the housing unit itself.

The clear inference of these observations is that when the dynamic of arbitrage is set in motion and the housing market becomes disordered, the market exhibits disfunction in all its sectors, and all operate not to arrest or delay the process but to speed it up and intensify its effect.

. . . . . .

The above completes the framework of theory which integrates our statistical studies. We have observed the inadequacy of traditional concepts of the household succession process to encompass or explain the rapid transition and decay of neighborhoods in American cities following World War II and how these concepts, when articulated as public policy, have contributed significantly to widespread social disbenefit instead of the social gain they were expected to produce.

In the light of this recent experience, we have postulated a fundamental restatement of the nature and function of the succession process. We see the

housing stock itself as an inert commodity, the fluctuating values of which are determined by the housing preferences of householders; and we see these preferences as expressing peoples' concern not solely with the physical characteristics of housing (as in tradition theory) but with a whole constellation of attributes we call "the housing bundle." We have suggested that certain of these attributes (those collectively designated "neighborhood characteristics") have greater impact in setting housing values than such physical traits as age or modernity, once regarded as decisive in determining market values and initiating the cycle of succession.

Examining more closely the function of the preference bundle, we have noted that the value or utility of a family's housing may change in a number of ways: it may be upranked (increased) or downranked (diminished); and either of these may happen actively (as result of a voluntary move to a more preferred housing bundle or to one less preferred) or passively (as a result of changes in the housing bundle over which the household has no control).

Passive downranking of housing value, we have noted, has been a common postwar experience of American urban households, and it has been closely associated with falling levels of neighborhood income and with changing racial composition of neighborhood populations. We have asserted that the mere expectation on the part of householders themselves or of lending institutions that these changes in neighborhood characteristics may take place will cause values to drop on an areal basis, triggering not merely household succession but also neighborhood transition on a large scale. It is this latter dynamic we find operative today in suburban areas of St. Louis County, adjacent to neighborhoods where the transition cycle has already been played out or is underway. The cycle itself, we have found, terminates in abandonment and demolition, an end-stage reached when successive drops in value

have produced a level so low that to maintain the housing stock in usable condition becomes unprofitable. Approaching this terminal stage, successive households will have suffered individual loss; but it is this terminal neighborhood depletion — the conversion of once populous districts to urban wasteland -- that produces generalized, jurisdictional disbenefit.

In the operation of the housing market, all the elements of succession observed above function together in a reciprocally reinforcing way to produce a moving front of change, a discernible process or system of transition we call arbitrage. Stated in purely market terms, arbitrage is a continuing state of market disequilibrium; it is triggered by an initial mismatch between supply and demand in the boundary area between low- and high-income neighborhoods, a condition which makes it profitable to convert housing stock to occupancy by households of increasingly lower economic status as the boundary moves ever deeper into the formerly high-income neighborhood. We assert that arbitrage generates an internal dynamic - the element of expectation noted above -- and that, unless halted by externally imposed constraints, it will continue to exhaust the housing stock that lies in its path, long after the demand factors that initiated it have ceased to obtain or to exert any measurable impact on the open market.

We are now ready to put this body of theory to the test. The following Part Two is in four sections. In the first we seek to demonstrate the general succession model and some of its basic hypotheses -- notably, the primacy of income-level over age of the housing stock or racial character of the neighborhood as an impelling factor in change -- by examining statistically the course of value-chang

over the long period 1930-1970 in fifteen St. Louis districts selected as representing a full spectrum of neighborhood characteristics and situations.

In the second section, we probe deeply into the validity of the household preference model which is fundamental to our theory. We test the model in three ways: first, for a large number of properties, where explicit market values and much collateral data are known, we demonstrate statistically how the various components of the housing bundle are weighted in the expressed value; second, a large number of moving experiences of specific families are examined to demonstrate what premiums people are actually willing to pay for a particular preferred housing bundle or what discount they insist on for one less preferred; finally, we present the results of an attitudinal survey, where householders state explicitly the ranking of their housing-bundle preferences. We show that the findings of all three analyses -- as well as of other, independent studies -- are consistent in confirming the preference bundle we have defined.

In the third section we show how these behavioral preferences can effect rapid neighborhood transition, focusing on the post 1950 decades. First, in a study of University City, we show that external constraints were successful in aborting the arbitrage dynamic so that the process was stopped long before end-stage was reached. Second, in a statistical analysis of 32 St. Louis neighborhoods, we attack the thorny problem of how racial change impacts on the market; we conclude (with corroborative detail from the foregoing) that racial change is perceived by households as a harbinger of income change. Third, in a study of Wellston, we show how, in the absence of constraints, arbitrage proceeds through successive stages until a price floor is reached and the abandonments of end-

state ensue. Fourth, we demonstrate the successive waves of arbitrage visibly, in a series of graphic presentations of the ratchet-like fluctuations in housing turnovers and prices. Finally, we summarize the implication of this body of evidence.

In the fourth section, we examine the role of the Federal Housing Administration in this recent history, and we present the findings of a special analysis of the effect of FHA's 1966 ruling relaxing the "neighborhood quality" requirements for obtaining federally-supported mortgages insurance. We conclude that federal policy, although consistently motivated to produce social benefit for all income categories of households, most often worked to disadvantage blacks (both of middle- and low-income status) as well as low-income households of all ethnic types, and that it contributed signally to generalized disbenefit of the urban society.

We turn now to the evidence.

PART TWO

THE EVIDENCE

Chapter 1

THE DIMENSIONS OF TRANSITION

In this section we are testing the broadest parameters of our theory: the validity of the arbitrage model itself.*

This investigation falls into two parts. First, we must demonstrate its fundamental hypothesis -- that neighborhood income-level, not age of the housing stock as in classical theory, is of primary relevance in effecting the drop in housing values which makes possible the succession process. Recall that we have described arbitrage as a demand model of market disequilibrium, where the imbalance is provided by the overweaning demand from low-income households at the boumdary between rich and poor neighborhoods. Clearly, then, arbitrage as the encroaching boumdary we have described requires that the impelling factor be falling income-level.

Second, since arbitrage clearly implies that the devalued housing lies in the path of transition from high- to low-income occupancy, we must show the model itself in operation.

Now, what are involved in this investigation are two static factors -- age of the housing stock and degree of proximity to transition; and two fluctuating factors which must be examined over a time-scale -- housing values and neighborhood income-level. A third element of change -- neighborhood racial composition --

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*Source material for this section is to be found in The Neighborhood Succession Process, by Little, Nourse and Phares, Department of Housing and Urban Development, January 1975.

is not involved in our divergence from classical theory, but does have undeniable contemporary relevance and is therefore included in our analysis.

In order to test these broadest dimensions of our postulate in the broadest way, we made two decisions about the data base of this study that result in some statistical awkwardness but that produce an unimpeachably representative and therefore more conclusive base. We chose a very long time-horizon -- the four decades 1930-1970; and we examined fifteen neighborhoods within the St. Louis metropolitan area which exhibit the relevant factors noted above in the full range, both of degree and of combination. Let us consider this data base in some detail.

A. The Neighborhoods*

Figure 2 is a map showing the location of the study areas by census tract and the change in their median income-level over the 40 year period, indicated as increasing, stable, or decreasing. Figures 3 through 8, to be read in sequence, show the path of neighborhood transition by health districts for the period 1950-1970.** The five neighborhoods of Figure 2 within St. Louis city are defined by census tracts and by unofficial boundaries popularly acknowledged by city residents. It will be seen, by observing the entire map sequence, that all but one (No. 5, West End) are in varying degree remote from the path of transition, while West End lies fairly in line with the path.

The ten neighborhoods within St. Louis county were chosen to present a ring girdling the city, except for No. 9, Kinloch, which is of special interest as a

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*Source material for this section is H. O. Nourse and D. Phares, "Neighborhood Transition: A Comparative Analysis of Income, Age and Housing Values," Chapter 3 in The Neighborhood Succession Process.

**These latter maps are from Urban Decay in St. Louis.

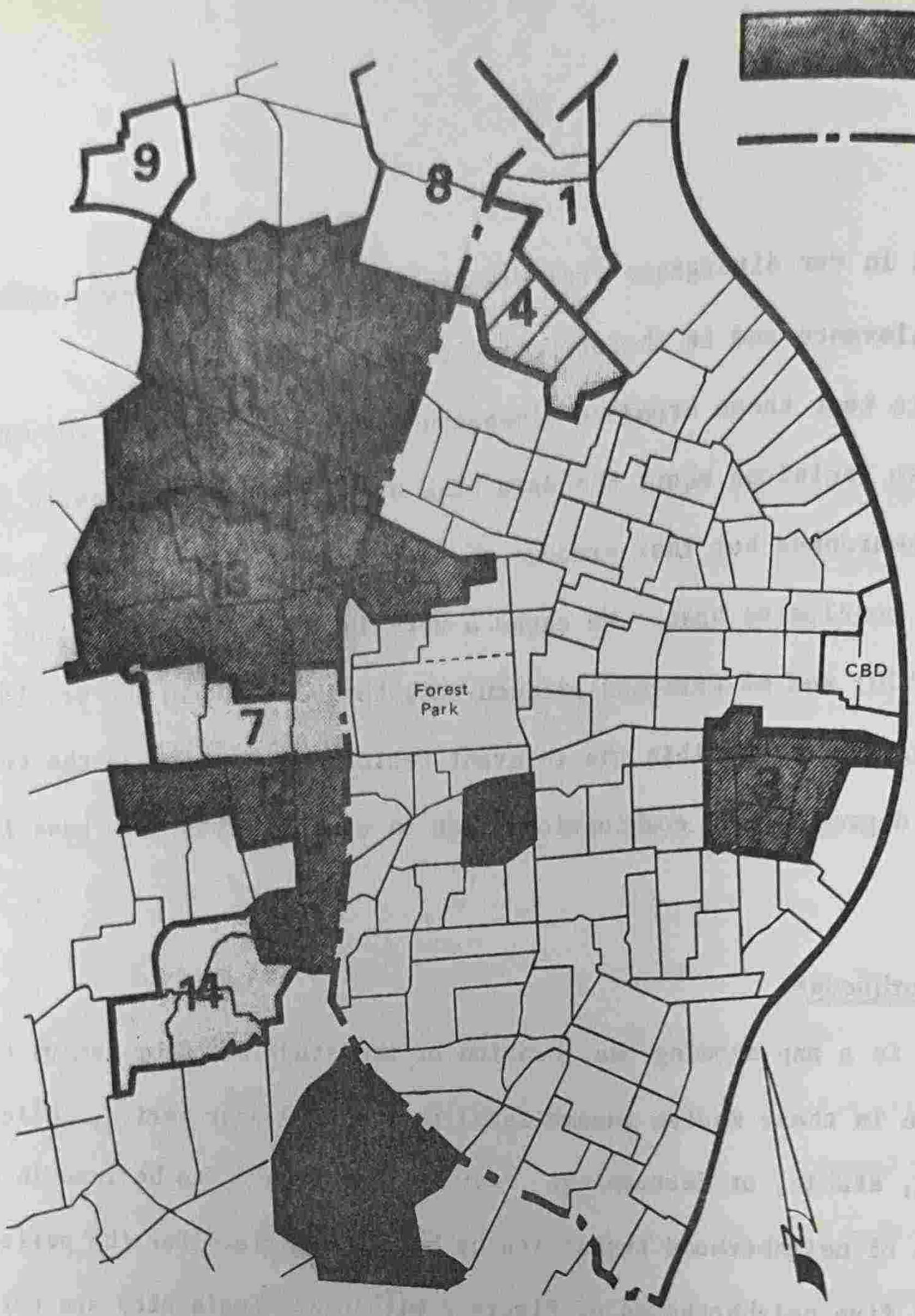


FIGURE 2
STUDY AREAS: ST. LOUIS CITY AND COUNTY

CITY

1. Baden
2. The Hill
3. Soulard-Lafayette
4. Walnut Park-Riverview Gardens
5. West End.

COUNTY

6. Affton
7. Clayton
8. Jennings
9. Kinloch
10. Maplewood
11. Normandy
12. Richmond Heights
13. University City
14. Webster Groves
15. Wellston

DECILE RANK LEVEL

Increasing
Stable
Decreasing

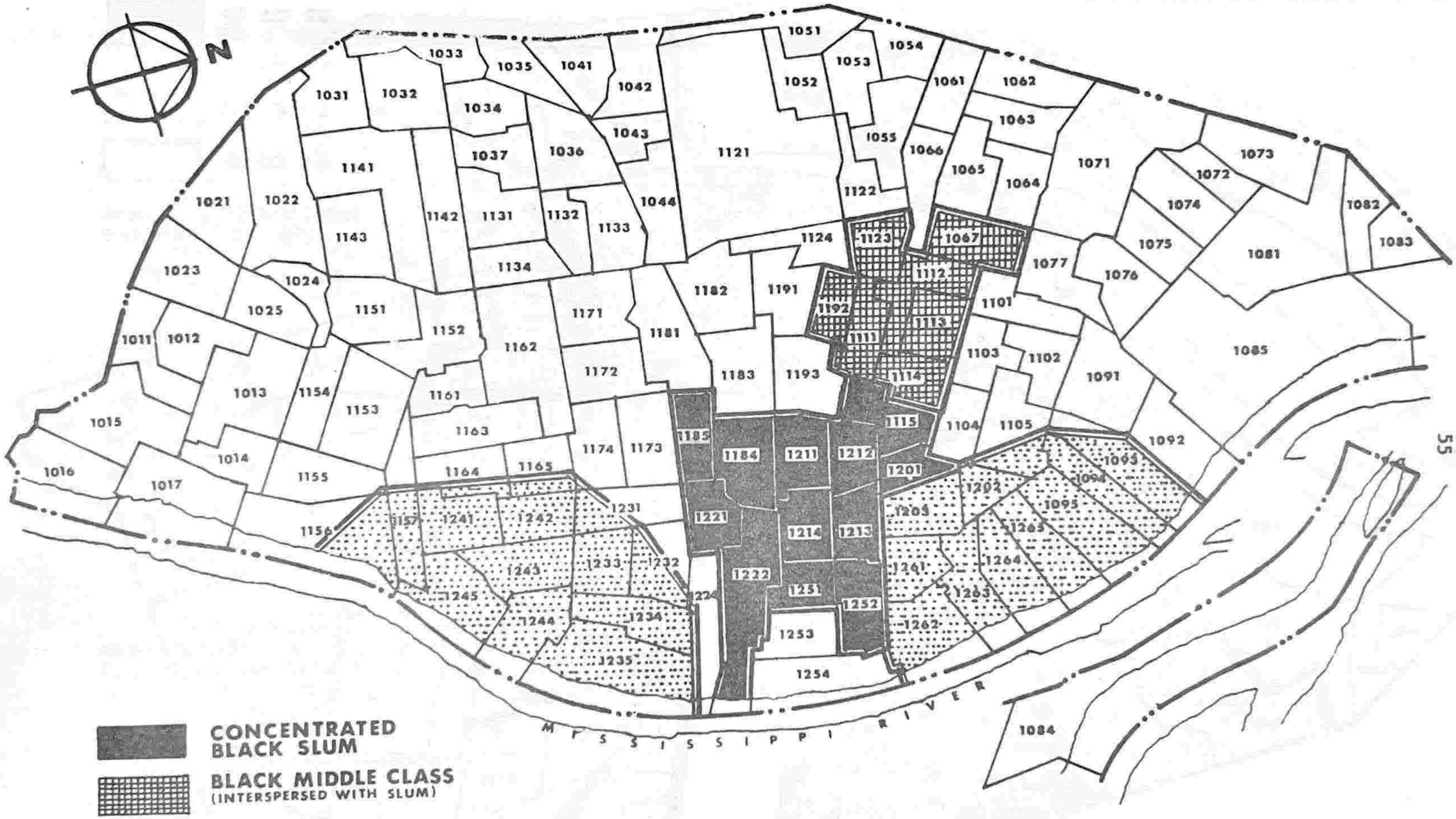
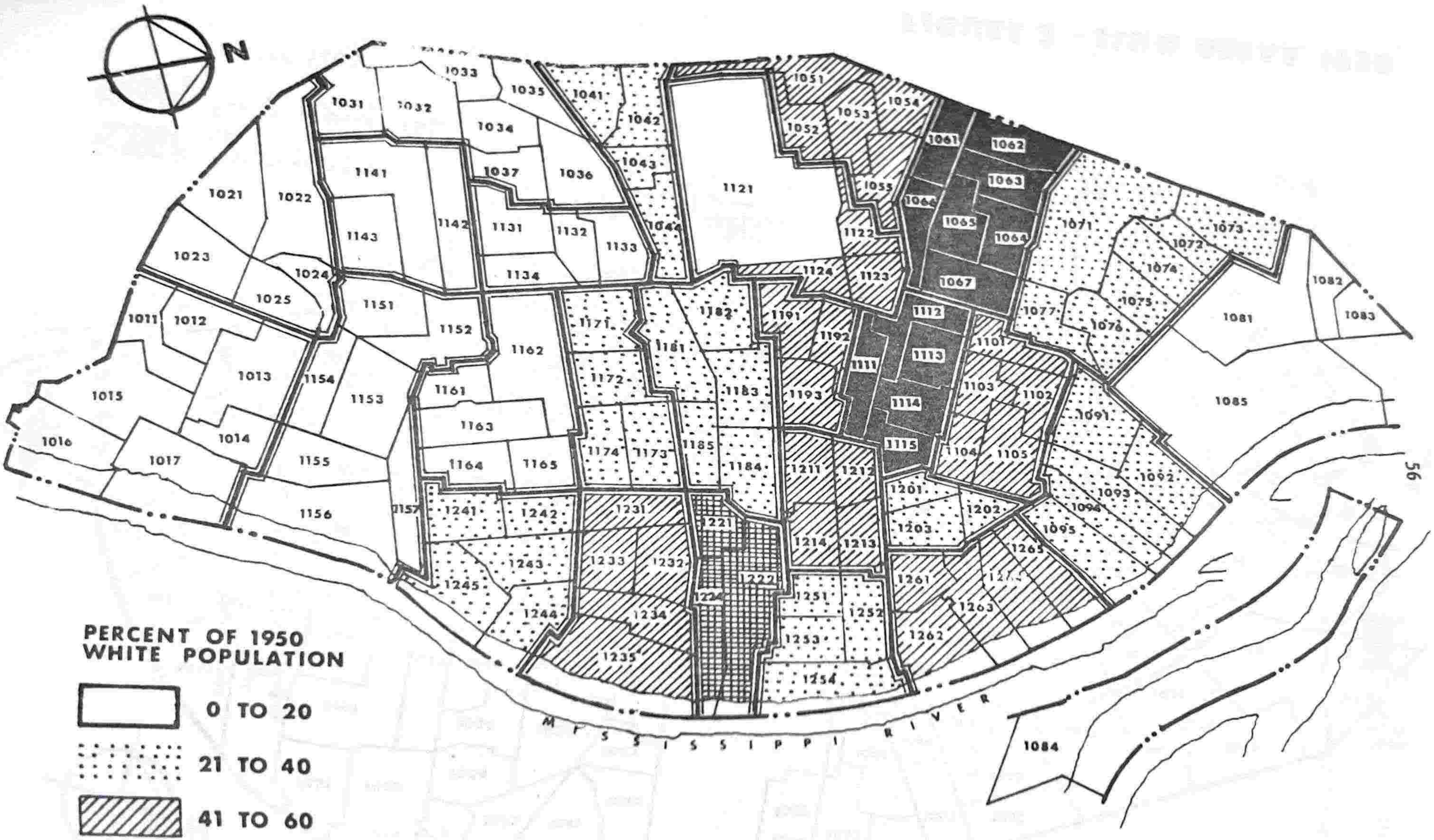


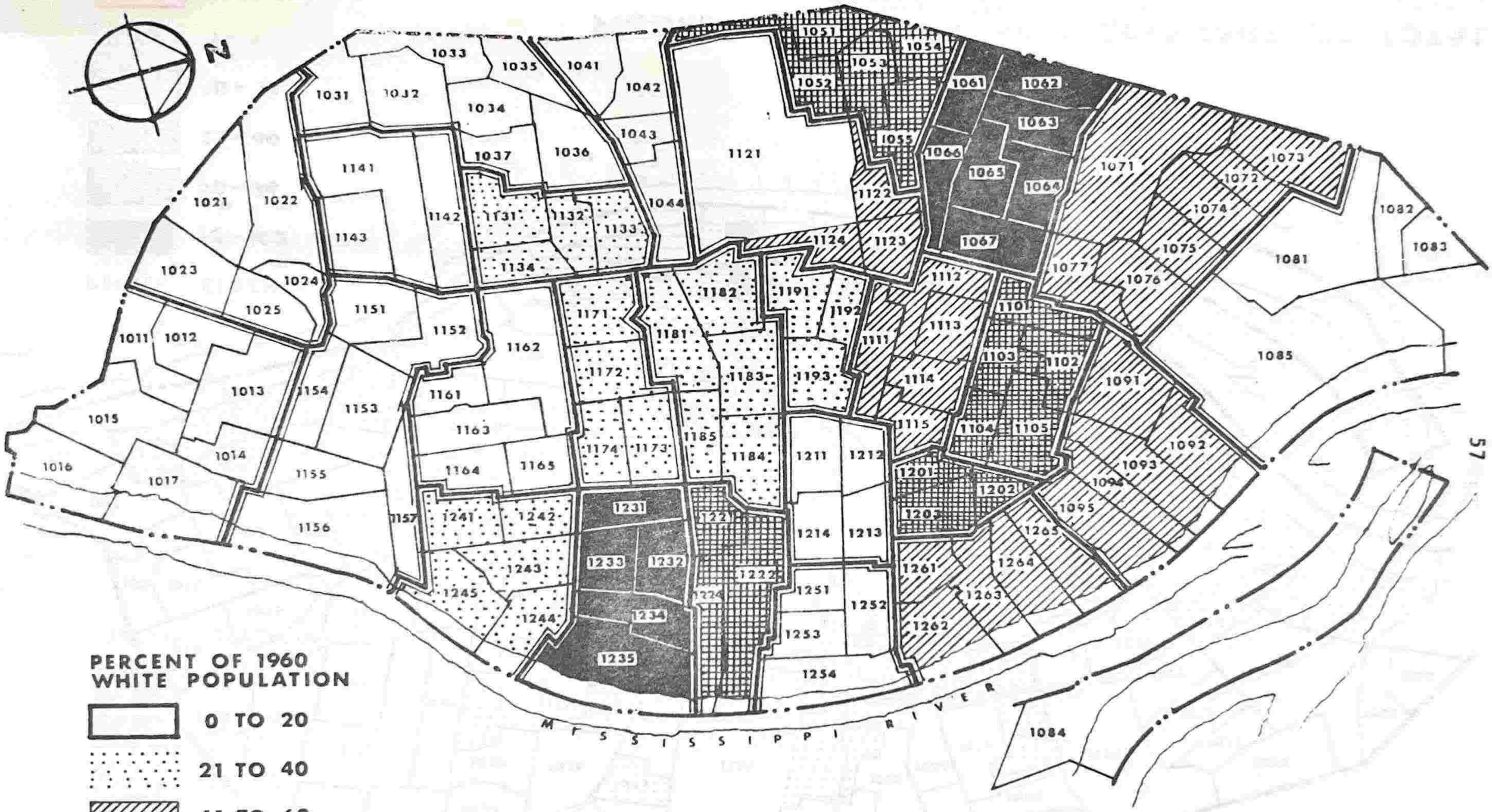
FIGURE 3 - SLUM AREAS, 1950



PERCENT OF 1950 WHITE POPULATION

- 0 TO 20
- 21 TO 40
- 41 TO 60
- 61 TO 80
- 81 TO 100 +

FIGURE 4 – NET OUTMIGRATION OF WHITES, 1950 – '60
BY HEALTH DISTRICTS



PERCENT OF 1960 WHITE POPULATION

- 0 TO 20
- 21 TO 40
- 41 TO 60
- 61 TO 80
- 81 TO 100 +

FIGURE 5 – NET OUTMIGRATION OF WHITES, 1960 - '70
BY HEALTH DISTRICTS

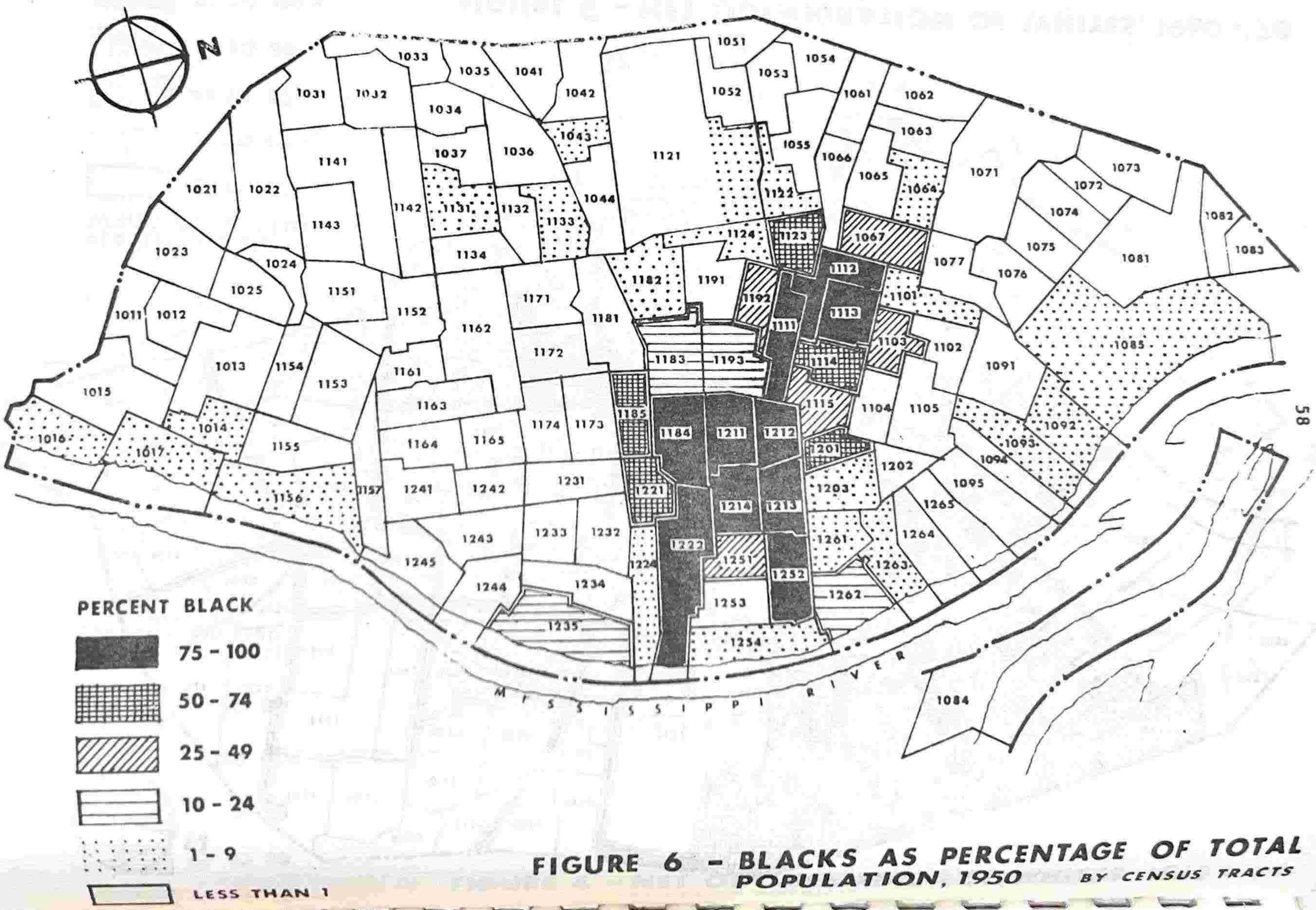


FIGURE 6 - BLACKS AS PERCENTAGE OF TOTAL POPULATION, 1950 BY CENSUS TRACTS

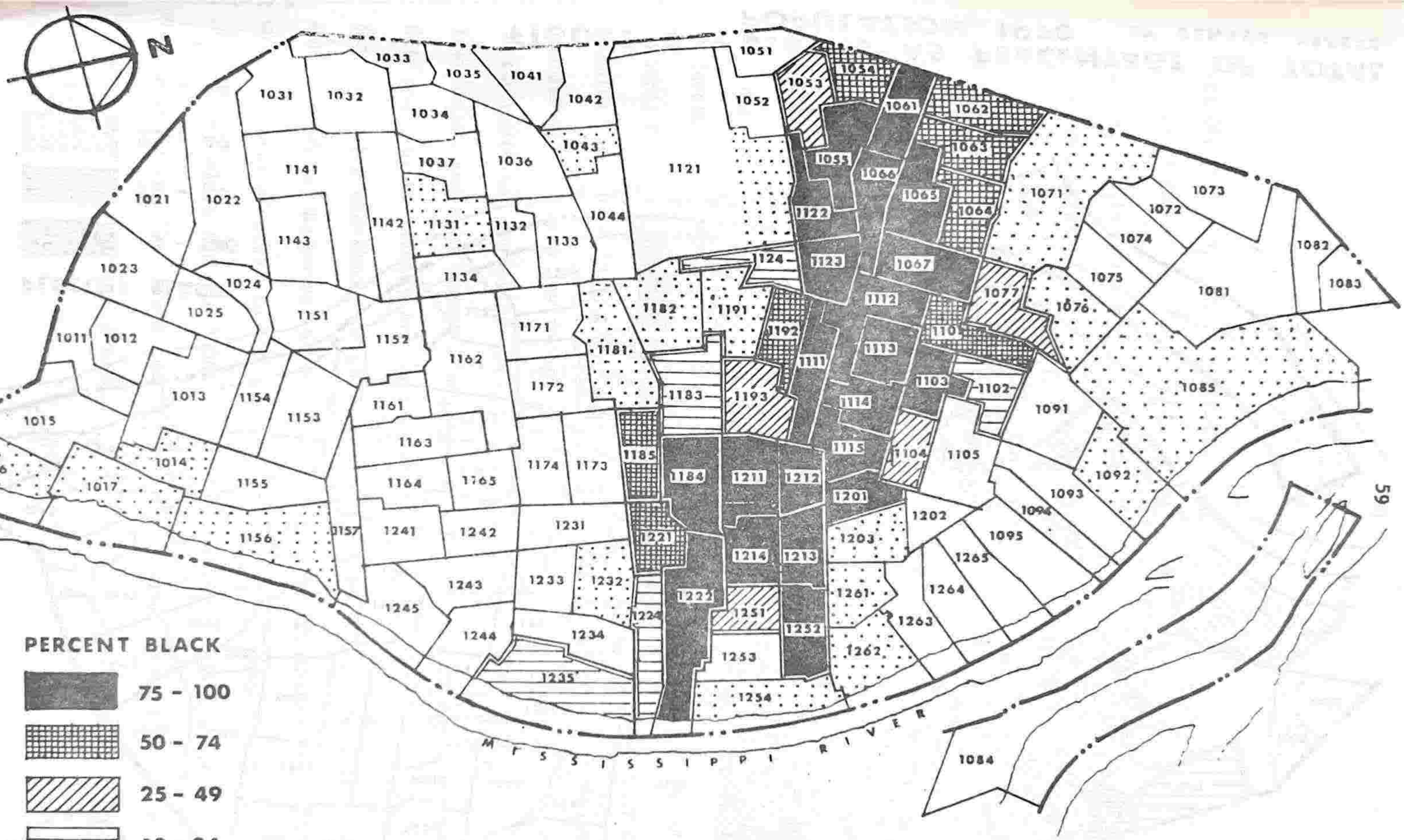
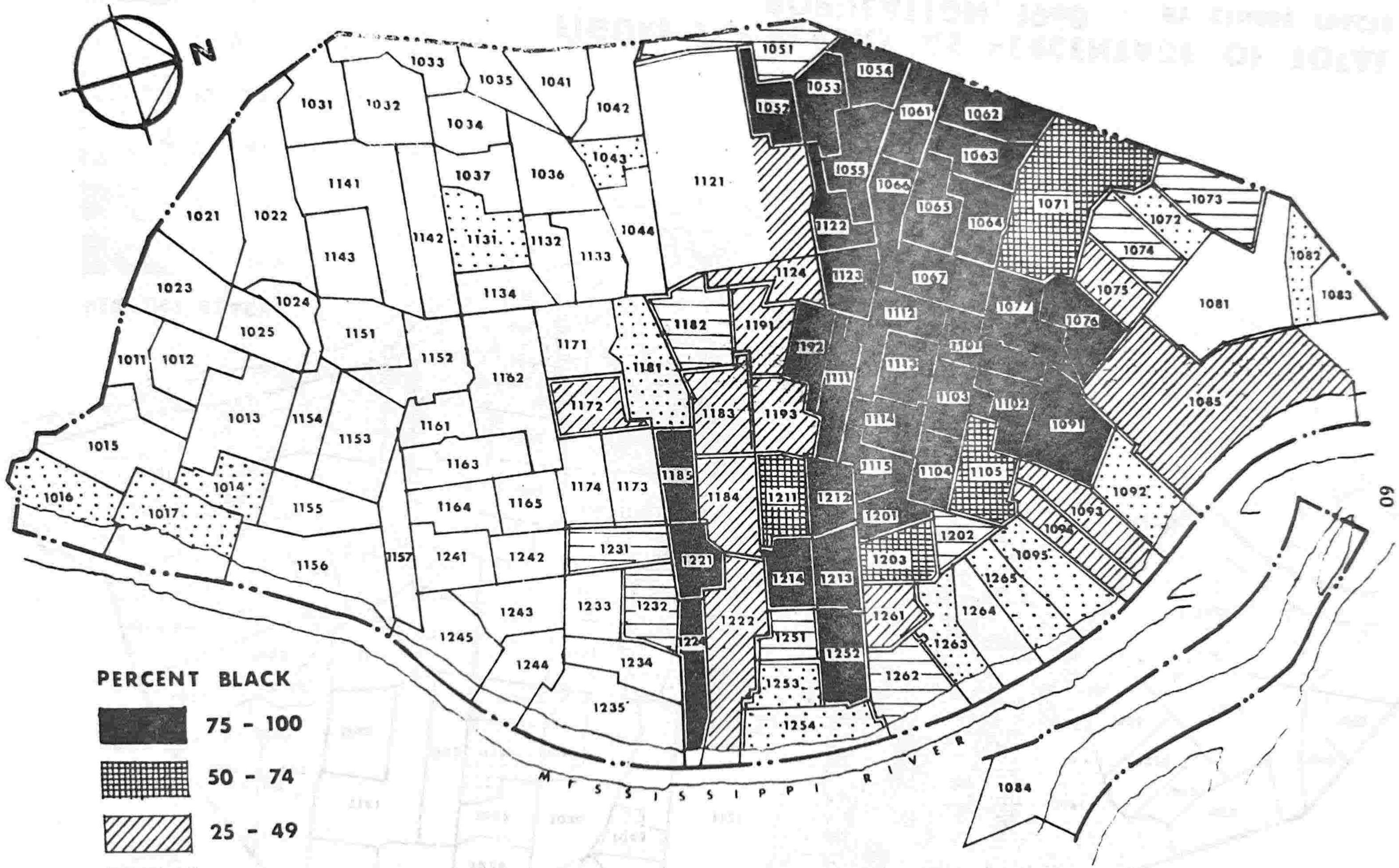


FIGURE 7 - BLACKS AS PERCENTAGE OF TOTAL POPULATION, 1960 BY CENSUS TRACTS



PERCENT BLACK

- 75 - 100
- 50 - 74
- 25 - 49
- 10 - 24
- 1 - 9
- LESS THAN 1

FIGURE 8 - BLACKS AS PERCENTAGE OF TOTAL POPULATION, 1970 BY CENSUS TRACTS

stable, though low-income, all-black community, and No. 14, Webster Groves, also of special interest as one of the oldest St. Louis suburbs, having stood in relation to the city as a bedroom community since 1870. All of the county areas except the largest (No. 11, Normandy) are defined both by census tracts and by municipal boundaries: Normandy, actually a school district, comprises twenty-five "postage-stamp" municipalities. We will now briefly characterize each of the study areas to indicate the range of experiences they encompass. First, the five city neighborhoods.

The Hill is an Italian-American community with a very high level of self-identity and an upward trend in income status. It is exemplified by generally older and very modest housing, but well-kept and in sound condition. Soulard-Lafayette, located near the very geographic origins of the city and the present Central Business District, has the oldest housing of any of the study areas (median year built 1889). It manifests rather extensive decay and abandonment and has settled at a low income-status. Baden and Walnut Park-Riverview Gardens, at the northwest corner of the city, lie just to the north of the main path of transition, and they occupy a median status position between the extremes of the Hill and Soulard-Lafayette: both have remained relatively stable areas at or just above the mid-income range, though Walnut Park had had notable racial shift even by 1970 and Baden may have experienced some shift since then. The West End, as noted, lies directly in the path of decay and has fallen precipitously in income-level since the mid-1950s. Here we have noted only the outstanding differences between the five areas; as the report develops, we will detail their differing experiences in all categories.

Of the county areas, Affton at the extreme south and Jennings at the extreme north typify recent developments built to satisfy the post-World War II demand for suburban housing. They are the newest areas chosen for analysis and fall above the mid-income range. The anomalous character of Kinloch has been noted; as a stable all-black community, albeit at the very bottom of the income ladder, it has been the subject of considerable sociological and economic study. While its housing stock is not old (median year built 1950), it resembles in many respects a rural southern town, though it exhibits internally-supportive, inertial strength. At the other income extreme is Webster Groves, also previously noted for its venerable age, a mainly white residential community which has sustained a high income-level for several decades.

Clayton offers a departure in yet another direction. It has, de facto, become a displaced central business district, competing with the downtown St. Louis Central Business District, and like Webster Groves it occupies the top level of the income ladder. Its stately old homes and apartment buildings (median year built 1929) comprise one of the most desirable suburban residential areas in the SMSA. It is to be noted that much of Clayton is buffered from the path of neighborhood transition both by Forest Park and by the Washington University campus.

University City, one of the largest and oldest of the inner suburbs, presents us with further contrast. A community of professionals and entrepreneurs, it has experienced the effect of both racial and some income transition, especially along its eastern border with the city and its northern borders with Wellston and Normandy. The remaining four areas — Wellston, Maplewood, Richmond Heights and Normandy -- occupy value- and income-positions between the extremes exhibited by Kinloch and Clayton.

Considering collectively the fifteen study areas in both city and county, we see that the age of the housing varies considerably as do both the level and change in income, the level and change in racial composition, and the proximity to transition. Median year built ranges from 1889 to 1952. Income rank ranges from 2 to 10 (on a scale from 1, lowest, to 10), with changes up and down over the 40 year study period by as much as four ranks. Racial composition varies between 9 and 96 percent nonwhite, with changes of from 0 to 94 percentage points in that ratio. And proximity to income transition ranges between "immediate" and "far removed." Thus, variation in the critical dimensions of age of housing, income, racial composition, and racial change and proximity is amply exhibited by the sample neighborhoods.

The final factor in our list of critical elements for this investigation is, of course, housing value, which may be regarded as the variable we are trying to explain. Our wide range of sample neighborhoods makes it possible for us to determine which of the above dimensions — age, income level, racial composition, or proximity to transition -- has most impact on establishing or changing levels of housing value.

If age were, in fact, a more important factor in determining housing values than income, we would expect, generally, property values in older areas to drop more and more compared to values in newer areas. Our data and sample of communities enable us to address this question directly. The test we have defined is a detailed examination of the time-trend in income status and property values for our sample of fifteen communities.

B. The Data Base - Age, Income, Property Values, Racial Composition

We began our data collection by selecting at random 300 housing units, by address, within each sample community.* For each area, the selection was made from the housing stock existing in the year when the area was nearly settled, since to take earlier readings could easily distort the observed change in income rank. This latter fact accounts for much of the evident variation in the time-span of the observations.

Since clearly it is permanent income or economic status that is most closely linked with housing value, we determined that the best way to avoid distorting vagaries of current income, non-wage income, etc. was to base our index of income-level on a ranking by occupation of head-of-household. For each address and for each change in occupant household, the occupation data was obtained from the R. L. Polk Directories for St. Louis City and County, published every second or third year prior to 1960 and yearly since that date. From information available in the federal census, it was then possible to convert the occupation data into a decile ranking of incomes:: each occupation is assigned a decile rank from 1 to 10, where the lowest 10 percent of wage earners are assigned a 1 and the highest 10 percent a 10. In the following, the term "decile rank" refers to the index of socio-economic status. It then becomes possible to establish a "median decile rank" for a neighborhood for any year of the study period.**

*The very randomness of the selection produced some minor variation in this number. Where addresses proved to contain multiple dwelling units, the number was exceeded. Where data proved to be unobtainable, the number was less.

**Occupation changes recorded between census years are given the decile ranking of the nearest census year. For a full discussion of this methodology, where decile rank is correlated with census income and with property values, see Appendix B, op. cit.

Table 1

AGE OF HOUSING, DECILE RANK CHANGE AND PERIOD OF CHANGE BY NEIGHBORHOOD

Study Area	Median Year Built	Period of Change in Decile Rank	Change in Decile Rank from	to
St. Louis City				
Baden	1932	1936-37	5	6
		1939-40*	6	7
		1952-55*	7	6
The Hill	1910	1941-42*	1	2
		1946-48*	2	3
		1963-64*	3	4
		1970-71	4	5
Soulard-Lafayette	1889	1936-37	5	4
		1942-44	4	5
		1952-55	5	4
		1966-68	4	3
Walnut Park-Riverview Gardens	1923	1926-30*	5	6
		1952-56*	6	5
		1965-66	5	6
		1969-70	6	5
West End	1900-10	1952-55	8	7
		1955-56	7	6
		1958-59	6	5
		1960-61	5	4
St. Louis County				
Affton	1952	1934-36	5	6
		1941-43*	6	7
Clayton	1929	1939-41	9	10
		1953-59*	10	9
		1962-63	9	10
Jennings	1941	1941-43	5	7
		1953-55	7	6
Kinloch	1940	1953-55	3	2

Table 1 (Continued)

Study Area	Median Year Built	Period of Change in Decile Rank	Change in Decile Rank from	to
Maplewood	1920	1953-55	7	6
		1959-61	6	5
		1970-71	5	4
Normandy	1929	1930-32	8	7
		1966-67	7	6
Richmond Heights	1926	1928-30	9	8
		1941-43	8	9
		1953-57*	9	8
		1961-62	8	7
University City	1938	1943-46	8	9
		1953-55	9	8
		1968-69	8	7
Webster Groves	1924	1961-67*	9	10
Wellston	N/A	1934-36	4	5
		1938-53	5	6
		1959-61	6	5
		1961-69	5	4

Source: Tables C-1 to C-15 in Appendix C, ""The Neighborhood Succession Process" by James T. Little, Hugh O. Nourse, and Donald Phares.

*Period defines a trend, there may be an inversion in the decile rank for a year or two.

TABLE 2

DECILE RANK TRANSITION CHARACTERISTICS BY NEIGHBORHOOD 1930-1971

Decile Rank Characteristic		Study Area*
Increasing (1-5)		The Hill
Increasing (5-7)		Affton
Stable (9-10)		Webster Groves
Stable (9-10)		Clayton
Stable (3-2)		Kinloch
Stable (6-7)		Baden
	(5-6)	Walnut Park-Riverview Gardens
	(6-7)	Jennings
Decreasing (5 to 3)		Soulard-Lafayette
Decreasing (7 to 4)		Maplewood
	(9 to 7)	Richmond Heights
Decreasing (8 to 4)		West End
	(6 to 4)	Wellston
	(7 to 6)	Normandy
	(9 to 7)	University City

Source: Tables C-1 to C-15 in Appendix C of "The Neighborhood Succession Process"

*Refer to Figure 2 for their location and spatial proximity to each other.

TABLE 3

Comparison of Median and Probability Measures of Neighborhood Transition

Study Area	Direction of Change as Measured by*		
	Median Rank	Probability	Disagreement(X)
St. Louis City			
Baden	S	D	X
The Hill	I	I	
Soulard-Lafayette	D	D	
Walnut Park-Riverview Gardens	S	D	X
West End	D	D	
St. Louis County			
Affton	I	S	X
Clayton	S	D	X
Jennings	S	S	
Kinloch	S	S	
Maplewood	D	D	
Normandy	D	D	
Richmond Heights	D	D	
University City	D	D	
Webster Groves	S	S	
Wellston	D	S	X

Source: Tables 3-1 and 3-6 of "The Neighborhood Succession Proces"

*D=decreasing, S=stable, I=increasing

The results of this compilation are summarized in Table 1, which also shows the median year built for the housing stock of each neighborhood. Terminal years shown in the column "Period of Changes in Income" indicate that no change in neighborhood median decile rank was recorded after that date. The data of Table 1 are further summarized in Table 2, which groups the neighborhoods by nature of socio-economic transition over the period -- increasing, stable, or decreasing: the median decile rank for the terminal year is shown, preceded by that ranking which showed the greatest divergence in the preceding period. Where only one unit rank of change is noted, the neighborhood is regarded as stable.

Using the same base data but manipulating them differently, we also compiled an index of the probability of income change for each neighborhood, over the entire period. That is, the differences in decile rank for the occupation of the head of household from the first to last year of the study was recorded as representing an increase, a decrease or no change; applying a simple binomial test, we then calculated whether the number of entries in each category was greater or less than would be expected by chance. It was soon apparent, however, that this technique was unable to reflect the magnitude of change, but that rather it tended to indicate the possible or probable direction of change. Even so, there was a high degree of correlation between the two indices, as shown in Table 3, where median decile rank and probability are contrasted. For each of the five areas where disagreement occurs, a rational explanation exists; but we will not burden the reader with these methodological niceties. Suffice it to say that although there is no direct functional relationship between the two measures in that they reflect different facets of neighborhood transition, the two work together to the understanding of this complex phenomenon. When an area is experiencing transition, the prob-

ability measure will reflect significant numbers of decreases (or increases) in rank, and the median decile rank will manifest the magnitude of the change in status of the community. In two cases where the indices differ (Baden and Walnut Park), we feel that the probability index may indeed presage a downturn in magnitude of change. Of the two measures, however, the decile ranking remains by far the most reliable and significant for our present study.

For our measure of property values we decided, after much deliberation, to use the median (census tract) values as given in the four decennial censuses 1940 to 1970. Each data source we considered was found to have disadvantages,* but the advantages of the federal census far outweighed its most obvious drawback -- the long ten-year interval at which change is recorded. The most salient recommendation for using the census is that, since all our study areas were defined by census tracts, it provided us with an accurate median value for the entire housing stock of the neighborhood -- not just for those houses sold or for the relatively small number of houses in our random sample. A median figure gains in validity as the base widens, and the census figure provides the widest possible base; moreover, the accuracy of the census figures has been confirmed by several independent studies. The long periodicity of the data clearly prevents us from pinpointing the timing of change in value relative to decile rank; but we are still able to trace the time-path of socio-economic status spatially across the study areas and relate this to changes in value.

*Despite considerable compilation, two other data sources were ultimately rejected. First was the Federal Revenue Stamp affixed to property deed transactions; unfortunately this highly reliable source was not available in Missouri after 1967. A second was actual FHA records of sales transactions for the period 1961-71. Thus, of these two highly factual data sources, the one was not available for the very important early period of our study, the other for the equally important final years. Compilations from these two sources were therefore used here only referentially, though in later sections they will be used directly.

The median housing values thus derived are presented in Table 4. In Table 5 they are shown as relative values, where the SMSA median value = 100, and in a neighborhood ranking from 1 (highest) to 15 (lowest).

From the same source -- the four federal censuses 1940-70 -- we present, in Table 6, the racial composition of each of the fifteen neighborhoods at the end of each of the four decades.

Proximity, the final significant element in our analysis, cannot, of course, be shown statistically. The picture emerges from close study of the maps, Figures 2 through 7, to which specific reference will be made in the following discussion.

This completes our data base, upon which the ensuing narrative discussion is founded. First, in a run-through of the neighborhoods, we will seek to demonstrate our fundamental hypothesis whereby neighborhood socio-economic status supplants age of the housing stock as the prime determinant of property values. Finally, in a further analytic breakdown of several of the neighborhoods, we will seek to demonstrate the operation of arbitrage.

C. The Determinants of Changing Value

What we are postulating here is that changes in social status and housing values in an area are not solely or even primarily a function of the age of the housing stock, but rather that values follow status, but in a particular manner. As low status groups spread in a moving front westward, out from the heart of the city and then into the county, a sharp response was elicited in the housing market. Reinforcing the supply-demand mismatch we have described was the increasing deprivation of available income to effectuate the repairs and improvements necessary

Table 4

MEDIAN HOUSING VALUES BY STUDY AREA: 1940-1970

Area	1940	1950	1960	1970
St. Louis City				
Baden	$ 5,319	$11,589	$14,999	$15,552
The Hill	$ 2,456	$ 6,751	$11,429	$13,047
Soulard-Lafayette	$ 1,914	$ 6,374	$ 9,802	$ 7,961
Walnut Park-Riverview Gardens	$ 3,606	$ 8,795	$11,696	$12,180
West End	$ 4,371	$12,659	$12,800	$13,019
St. Louis County				
Affton	$ 4,223	$12,112	$16,037	$17,803
Clayton	$14,905	$20,000+*	$25,000+*	$38,965
Jennings	$ 3,221	$ 9,493	$12,668	$13,838
Kinloch	$ 1,196	$ 2,310	$ 5,300	$ 7,825
Maplewood	$ 4,056	$ 9,656	$11,934	$12,863
Normandy	$ 3,790	$ 9,826	$12,718	$14,083
Richmond Heights	$ 5,922	$13,809	$17,256	$17,902
University City	$ 8,510	$15,000+*	$18,400	$18,600
Webster Groves	$ 5,690	$12,823	$15,044	$17,529
Wellston	$ 2,487	$ 5,642	$ 7,600	$ 7,669
St. Louis Metropolitan Area				
Total SMSA	$ 3,856	$ 8,919	$12,900	$16,300

Source: Compiled from Census tract data contained in Census of Population and Housing for 1940, 1950, 1960 and 1970. Tracts were aggregated to most closely approximate the study areas.

*Falls in an open-ended class, no median computed.

Table 5

HOUSING VALUE RELATIVES* AND RELATIVE RANKS** FOR STUDY AREAS: 1940-70
(Relative Ranks in Parentheses)

Area	1940	1950	1960	1970
St. Louis City				
Baden	138 (5)	130 (7)	116 (6)	95 (6)
The Hill	64 (13)	76 (12)	89 (10)	80 (9)
Soulard-Lafayette	50 (14)	72 (13)	76 (13)	49 (13)
Walnut Park-Riverview Gardens	94 (10)	99 (11)	91 (12)	75 (12)
West End	113 (6)	142 (5)	99 (7)	80 (9)
St. Louis County				
Affton	110 (7)	136 (6)	124 (4)	109 (4)
Clayton	387 (1)	- (1)	- (1)	239 (1)
Jennings	84 (11)	106 (10)	98 (9)	85 (8)
Kinloch	31 (15)	26 (15)	41 (15)	48 (14)
Maplewood	105 (8)	108 (9)	93 (11)	79 (11)
Normandy	98 (9)	110 (8)	99 (7)	86 (7)
Richmond Heights	154 (3)	155 (3)	134 (3)	110 (3)
University City	221 (2)	- (2)	143 (2)	114 (2)
Webster Groves	148 (4)	144 (4)	117 (5)	108 (5)
Wellston	65 (12)	63 (14)	59 (14)	47 (15)

Source: Computed from data in Table 4.

*Median for area relative to median for the entire metropolitan area.

**The relatives for a year ranked from 1 (high) to n (low), shown in parentheses.

-No median computed.

TABLE 6

PERCENTAGE OF POPULATION NON-WHITE BY STUDY AREAS: 1940-70

Area	1940	1950	1960	1970
St. Louis City				
Baden	*	1.18	*	5.86
The Hill	*	*	*	*
Soulard-Lafayette	8.99	10.65	11.47	28.76
Walnut Park-Riverview Gardens	*	*	*	34.53
West End	1.42	1.30	59.78	95.54
St. Louis County				
Affton	*	*	*	*
Clayton	3.63	2.84	1.20	1.46
Jennings	*	*	*	*
Kinloch	100.00	100.00	100.00	100.00
Maplewood	*	*	*	*
Normandy	*	*	*	15.19
Richmond Heights	7.11	6.97	6.81	12.82
University City	*	*	*	20.04
Webster Groves	13.12	14.33	8.15	10.17
Wellston	5.40	6.10	8.56	71.12

Source: Same as Table 4.

*Less than 1%.

to maintain property values (a stage our studies indicates is normally reached at a decile rank of 4 and below), thus producing the terminal cycle of blight-decay-abandonment. Nowhere in this process does age per se play a primary role in determining how economic status, and therefore value, will vary. Transition on a neighborhood scale is most clearly linked with proximity to another area that has already experienced falling status.

Referring back to our Table 2, we note that nine of our fifteen neighborhoods are geographically clustered into three groups -- one stable, the other two decreasing in status. The other six areas exist in relatively isolated position. We will consider the isolated areas first, then the three groups.

Soulard-Lafayette

If age is indeed a determinant of socio-economic status and value, this oldest residential district in St. Louis, a prestige neighborhood in the mid- and late-19th century, could be expected to exemplify the fact. In a sense this is true, because Soulard-Lafayette had already, before the onset of our study period, experienced the classic succession sequence and had devolved to the status of a white slum (see Figure 3). At first glance, it would seem to be a textbook case justifying traditional theory. But for this to be fully true, decile rank and values should continue to drop during the four decades of our study -- particularly under pressure from the rush of post-1950 new construction in the SMSA -- and should have reached rock-bottom by 1970. This did not exactly happen.

On the contrary, we note from Tables 1 and 4 that, concomitant with a rise in decile rank in the period 1942-52, there was an appreciation in housing values -- both absolute and relative to the metropolitan median -- between 1940 and 1960.

We note further, from Table 5, that whereas Soulard-Lafayette began the study period with a value-ranking of 14 (among the 15 neighborhoods only Kinloch was lower), at the end of the period it occupied the 12th rank, while Wellston -- an inner suburb directly in the path of westward transition -- was No. 14. Regardless of any other aspects of the Soulard-Lafayette history, these facts alone serve to invalidate age-of-housing as the sole or prime determinant of decile rank and values.*

But, as noted, the district was at the outset a badly deteriorated and exhausted community; and of course it is true that housing of this extreme age requires more expenditure for upkeep. The decile rank has now dropped to 3, and the area shows widespread decay, abandonment and demolition, except for recent efforts at renovation on and around Lafayette Square, a quadrangle of very old but architecturally imposing houses facing a central park area. From Figures 4 and 5 we note the very heavy outmigration of the white population (between 40 and 80 percent 1950-1960 and between 60-100 percent 1960-70), unmatched by black inmigration except for a narrow strip along the northern border. From 1960 to 1970, housing values dropped not merely relative to the SMSA median but absolutely as well -- the only one of the 15 neighborhoods to experience an absolute decrease over that period.

Clearly (apart from the inmigrant, younger, mostly white restorationists) Soulard-Lafayette now comprises a small remnant population of older white homeowners, unable to sell and too low in income-level either to obtain other housing or to maintain their properties at market standards. Finally, it is interesting

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*The more recently created Lafayette Square Historic Site Preservation District could have had no real impact before 1970.

(see Table 6) that the entire history of Soulard-Lafayette has taken place with only a relatively minor change in racial composition: falling values here were not associated with extensive black incursion. This involves, too, the area's proximity to the path of transition.

In sum, Soulard-Lafayette appears to exhibit both the degree of accuracy inherent in the age hypothesis and its intrinsic unreliability as an index of change. That is, obviously once a certain degree of antiquity is reached, dilapidation can be averted only by a heavy expenditure for maintenance and/or renovation, whereas it is more likely that fewer rather than greater funds will be available for the purpose. Nevertheless, despite its extreme age, area values responded to an increase in median decile rank as postulated by our substitute hypothesis: the values rose, and their subsequent decline was preceded by a fall in decile rank from 5 to a terminal 3 at the close of the study period.*

The Hill

The character of the Hill's population and its housing has been noted, but not the age of the housing stock. Again, it is one of the oldest residential areas in the sample (median year built 1910), and here the fallacy of the age hypothesis becomes almost glaringly evident. Also again, however, the Hill presents a special case. Its strong self-identity as an Italian-American working-class neighborhood is everywhere apparent: much of the business is clearly family-oriented, and property transfers have been facilitated by internal financing.

For a long period, the Hill had a median decile rank around 1-2, but following World War II its socio-economic level has appreciated, reaching a 5 in 1971.

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*We will not discuss the other areas at such length. Soulard-Lafayette has evident special relevance to the age/decile rank discussion.

Property values in the area have moved in the same direction, nearly doubling between 1950-60. Relative to the SMSA, its position improved overall but slipped somewhat between 1960 and 1970. As Tables 4 and 5 indicate, its relative drop has been much less than many other areas in the sample, and in fact its relative rank in housing value (Table 5) has risen from 13 in 1940 to 9 in 1970.

Here, then, is a case where quite old housing has experienced significant increase in absolute value and relative status <u>following a commensurate increase in socio-economic level</u>.

It is of interest that, while property values have reflected rising economic levels to a significant degree, they have nonetheless stabilized relative to the SMSA. This suggests that the association between socio-economic status and housing values on the down side may not be symmetrical with changes upward. That is: values do inexorably decline in response to falling status, especially as the bottom of the income distribution is approached; they do not appear, however, to rise as sharply with an increase in status. Obviously, our sample contains too few examples of status increase to give this notion a proper test. But it seems likely that it would remain accurate, since there are more intrinsic constraints to appreciation of value than to depreciation. In the case of the Hill, for example, it is evident that housing originally appropriate to a working-class population of decile rank 1-2 has a limited range of attainable maximum value.

<u>Affton</u>

Affton has relevance to our discussion mainly in terms of the effects of proximity: it is the sample area at furthest remove from the path of transition. It is also, however, the newest area studied, with a median year built of 1952, so here the issue cannot be clearcut. That is, we would expect, from our hypothesis

that Affton's remoteness from the moving front of falling status/falling value would give it immunity, so that values remain high; but the same expectation results from the age hypothesis, in light of the area's recent construction.

Another way of regarding Affton, however, is from the viewpoint of economic status alone. It is a typical post-World War II suburban community, but was never of high status: its households and its housing were at all times middle-income. It enters our study period with a decile rank of 5 -- the midpoint on our scale, and a status held at the same period by Walnut Park-Riverview Gardens, Jennings, and Baden, the three geographically clustered communities lying immediately to the north of the path of transition (see Figures 2 through 8). The table below shows the subsequent experience of the four communities:

	1940		1950		1960		1970	
	Dec.*	Val.**	Dec.	Val.	Dec.	Val.	Dec.	Val.
Affton	5-6	7	6-7	6	7	4	7	4
Walnut Park-Riverview Gardens	5-6	10	6	11	6	11	5	11
Jennings	5	11	7	10	6	8	6	8
Baden	5-6	5	6-7	7	6	6	6	6

*Dec. refers to Decile Rank (10 highest; 1 lowest)
**Val. refers to Relative Rank of Value Among 15 Neighborhoods (1 highest; 15 lowest)

The above shows that Affton, completely removed from areas of transition, increased its decile rank from 5 to 7 over the period and rose in relative value ranking from 7th place to 4th. Walnut Park-Riverview Gardens, immediately north of the path of transition, increased its decile rank from 5 to 6 but then fell back to 5, and its relative value ranking fell from 10th to 11th place. Jennings, somewhat more removed from transition, rose in decile from 5 to 7 then dropped back to 6, but its value ranking rose from 11 to 8. Baden, yet further removed,

had the same income history as Jennings but fell in value rank from 5th place to 7th, then regained one rank to end the period in 6th place (two rankings higher than Jennings).

In terms of these indices, at least, it is clear that proximity to transition areas results in lower decile rank and lower values. Table 6 shows us that neither Affton nor Jennings has experienced racial change, Baden has experienced minor change, and Walnut Park-Riverview Gardens had undergone a change by 1970 of slightly more than one-third its population.

A further inspection of Table 5 shows that other areas that entered the study period at an equal or higher status relative to the SMSA median in comparison to Affton -- Richmond Heights, University City and Webster Groves -- have all experienced a drop in relative value, whereas Affton has stabilized relative to the SMSA and, as noted, increased its relative rank from 7th to 4th place.

In the light of the other findings in this section, where age of housing stock is clearly shown to be irrelevant to the setting of socio-economic levels and values, we feel the stability and degree and absolute value-increase in Affton must be attributed to its remoteness, its lack of proximity to the areas of transition.

Kinloch

The last three of our "isolated" communities represent extremes of socio-economic level, with Kinloch, as noted, the lowest.* What is remarkable here is that, while this community which has been all black for decades (median year built

*Due to unavailability of data, we were unable to construct a median decile rank for Kinloch prior to 1953.

1940) has had a decile rank of 2 since 1955, median housing values in the area have not dropped either absolutely or relatively! Elsewhere within the SMSA — and particularly with conversion to the more intensive use implicit in occupancy by low-income black households — we have found that when the decile drops to 4 or below the consequent lack of maintenance funds has made the terminal sequence of decay and abandonment inevitable. Although the majority of housing stock within Kinloch is of low quality, neither decay nor abandonment in any significant degree has occurred and values were stabilized at least as late as 1970.

It is not our intention here to probe speculatively into fields of enquiry beyond the scope of our present analysis,but the obvious points of resemblance between the Kinloch and Hill cases cannot go unremarked. Moreover, we have

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ourselves, in presenting the arbitrage principle, stated that "households prefer to live among other households of roughly their same ethnic background and economic level, while at the same time all American households desire to be upwardly mobile." The "living among your own kind" hypothesis has been much debated, and it is also not our intention to add fuel to either side of that ongoing controversy. But we would be remiss not to point out how in these two St. Louis neighborhoods -- first the Hill, now even more so in Kinloch -- totally objective economic indices clearly demonstrate the operation of an inertial strength within such tightly ethnic, internally-supportive communities. With the more economically mobile Hill population, we have a case where old housing stock appropriate to a working-class occupancy of decile rank 1-2 has appreciated significantly in value following a rise in decile rank to 5. In Kinloch, with a stabilized decile rank of 2 and

housing stock of low quality, we have a case where, contrary to all expectation, housing stock has stabilized in value and even risen in relative ranking without experiencing decay or abandonment.

Clayton

Clayton, stabilized at the top level both of decile rank and housing value, ha two points of particular relevance to our discussion: the first is that its housing stock is quite old (median year built 1929); the second is proximity (or rather, the lack of it). Inner suburbs immediately to the north and south of Clayton and in line with the westward surge of transition, have experienced falling levels of both income and value; but Clayton, buffered from city neighborhoods behind the great expanse of Forest Park and the Washington University campus, has in the same recent period developed a concentration of highrise office buildings and prestige shopping facilities -- a displaced Central Business District successfully competing not solely with downtown St. Louis but with the outlying shopping centers as well.* The non-residential tax base resulting from this development has, as noted, produced a windfall gain for local households in significantly upranking the public services and access components of their housing bundle. It remained the most potent factor in maintaining Clayton's high status as the most desirable district in the SMSA where one can both live and work.

It is significant that Clayton's old housing consistently sustained a median value (nearly $40,000 in 1970) far above the SMSA median, despite the very high prices of recent construction in the outlying county. These luxury developments of the late 1960s and early '70s affluence caused Clayton to fall from 387 to 239 (Table 5) in relation to the SMSA; but among our sample neighborhoods the next highest relative 1970 position is University City's 114.

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*As of this writing, however, it is apparent that some of Clayton's competitive retail edge has been lost to Plaza Frontenac, a new development still further west.

There could scarcely be fantasized a better case for exposing the fallacy of the age hypothesis. But the question whether this high-level stabilization is due to Clayton's lack of direct contiguity with the path of transition remains speculative. It could be argued that development of the secondary Central Business District alone would have sustained high decile rank and value-levels in the community; but one must then ask whether, without the immunizing buffer, this development would have or indeed could have taken place. In any event, given the demonstrated experience of Richmond Heights and Maplewood immediately to the south and of University City, West End and Wellston immediately to the north, it seems likely that Clayton's location and status as the county seat did play a role in the success of its development.

Webster Groves

The somewhat confusing factor of a displaced Central Business District does not cloud the issue in considering Webster Groves: here, with minor differences, the Clayton pattern is repeated, minus the major commercial development. The housing stock is yet older (median year built 1924); the decile rank has hovered between 9 and 10 (10 for seven of the past nine years); and the housing value, which began the study period at a level barely one-third of Clayton's, remains considerably lower,yet still above the SMSA median and only one relative rank below Affton, the newest of the fifteen communities.

Webster is most tellingly compared, however, not with Clayton but with University City and Richmond Heights. In these latter areas (both with less old housing stock) values stabilized up to 1970, whereas in Webster they continued to appreciate absolutely (see Tables 1 and 4). Moreover, U. City fell 107 points relative to the SMSA median over the study period (Table 5), whereas Webster fell only 40 points.

Clearly then, age is not the crucial factor in determining decile rank and housing value levels, as in the traditional assumption. Proximity to neighborhood transition emerges as the crucial element in effecting absolute and relative shifts in housing values. This will become even more clear as we now shift attention to the three clusters of study areas shown in Figure 2.

Walnut Park-Riverview Gardens, Jennings, Baden

To some extent the experience of this group of extreme northern communities -- two within the city, one in the county -- has already been related (see Affton, above). That material will not be recapitulated here, but only summarized, with some additional detail.

To be particularly noted is that Walnut Park-Riverview Gardens, abutting the main thrust of transition immediately to its south, is the only one of the three to drop in rank relative to the other study areas over the period, falling from 10th to 11th place, while both Jennings and Baden rose in rank. But equally of note is that Jennings -- a postwar suburb and second youngest of all the communities (after Affton) -- ended the period in only 8th place, while the older Baden ended 6th: Jennings abuts transitional Normandy to its south, whereas Baden is the most remote of the three from all transition. Here again, the impact of contiguity to change is seen to override age differences which would seem to predict a contrary experience.

These internal distinctions among the three areas, however, reflect only relative degrees of proximity to change. As a group, the three did not lie directly in the path of transition but abutted it on the north, and their general status over the study period is one of stabilization. This is most apparent in

the consideration of decile ranking (see Table 1): Walnut-Riverview began the period at 5, fluctuated between 5 and 6, ended at 5; Jennings and Baden both also began at 5, rose to 7 and ended at 6. It is worth remarking that even within this general configuration of stability the impact of relative proximity to transition is observable.

We have already noted that Walnut-Riverview, with the highest degree of proximity, was the only one of the three to undergo significant change in racial composition; it remains to point out that, despite a shift over the four decades from less than 1 percent black to 35 percent, decile rank remained stable and at least up to 1970 housing values continued to appreciate absolutely. We will have occasion to return to this fact.

Maplewood, Richmond Heights

The history of racial change in these two communities is also of special interest.

We note from Figures 4 through 8 that these inner suburbs lay in the path of a later thrust of transition westward from the city, one really only beginning to manifest itself at the time of our earlier study, Urban Decay. The city tracts immediately to the east had experienced considered outmigration of whites, particularly in the decade 1950-60 (Fig. 4), but we see in Figures 7 and 8 that, from the data obtainable to us then, a true population shift was discernible between 1960 and 1970 in tracts just east of Kingshighway. As this front leap-frogged westward, Maplewood and Richmond Heights lay in its path, buffering the two high-income communities of Clayton to the north and Webster to the south. The intervening area in the city was for the most part developed post World War II. In

contrast both Maplewood and Richmond Heights are relatively old suburbs, with a median year built of 1920 and 1926 respectively. Richmond Heights, abutting Clayton, began the period with the same high decile rank of 9 but had fallen to a 7 by 1970; Maplewood, beginning at 7, had fallen to a 4, the level where upkeep at market standards becomes problematical. Values in both areas fairly stabilized between 1960 and 1970 but fell relatively. In relation to the SMSA median, Maplewood fell from 105 to 79, Richmond Heights from 154 to 110. Richmond Heights maintained its neighborhood ranking of 3rd place, but Maplewood fell from 8th to 10th place.

The point of particular interest here is supplied by Table 6. Here we learn that Maplewood, which experienced the serious drop in decile rank and in relative housing values, remained statistically an all-white neighborhood throughout the period. Richmond Heights, however, with a lesser drop in socio-economic rank, and still maintaining its high neighborhood ranking of 3rd place, almost doubled its black population between 1950 and 1970 -- although from a low base of 7 to a top of 13 percent.

This and the preceding group make it clear that, contrary to popular concept and some theory, a significantly increasing black population within a neighborhood does not alone inspire either falling socio-economic levels or falling housing values. In both groups, the community with the least racial change (or with none) depreciated the most in decile rank and values, while those with the largest racial change depreciated the least.

Normandy, Wellston, West End, University City

So far in this discussion, our test of the proximity hypothesis has been largely of a negative nature. With this final group, however, we come to those communities in our sample that lay directly across the path of the main thrust of transition outward from the city, and upon these falls the main burden of positive proof.

On this score there is no reason for doubt. First, we note from Table 1 that the age of the housing stock presents a range from very old to fairly recent: median year built is 1900 to 1910 for different sections of the West End, up to 1938 for University City (with data on Wellston's age unavailable). Now we trace the moving front of change westward into the cluster.

First to feel the impact of transition from the east is the West End. In 1950, when transition within the city got underway, it occupied a decile rank of 8, one rank below University City and Webster Groves, two ranks below Clayton. Within ten years it had dropped to a 4. Earlier, between 1940 and 1950, its value ranking relative to the SMSA median had appreciated from 113 to 142, its neighborhood ranking from 6th place to 5th; after the fall in income beginning in 1950, however, its relative housing value began to fall, reaching 80 in 1970, while its neighborhood ranking fell to 9th place.

Wellston was next, both spatially and in time-sequence, to feel the impact. Between 1934 and 1953 its decile rank had risen from 4 to 6; beginning in 1959, however, the decile rank began to drop, falling back to 4 by 1969. Already by 1960 its absolute housing value had ceased to appreciate, and over the entire period from 1940 it steadily lost relative value position, dropping from 65 to 47 relative to the metropolitan median and from 12th place among the neighborhoods to 15th.

Again, U. City and Normandy were further delayed from impact both spatially and in time. University City entered the transition period at a decile rank of 9, dropped to an 8 by 1955, but did not drop further (to 7) until 1968-9. Normandy appreciated in value relative to the SMSA between 1940 and 1950 (98 to 110) but subsequently fell to 86 in 1970, while over the entire period its neighborhood ranking rose from 9th to 7th place.

Here we see a clear pattern of timing and movement of socio-economic status loss followed by loss in housing value ranking. The most severe drops in both decile rank and value are observable in the West End, which has had the longest experience of transition; the next most severe in Wellston, which was the next impacted; and the least severe in University City and Normandy, the last to be affected.

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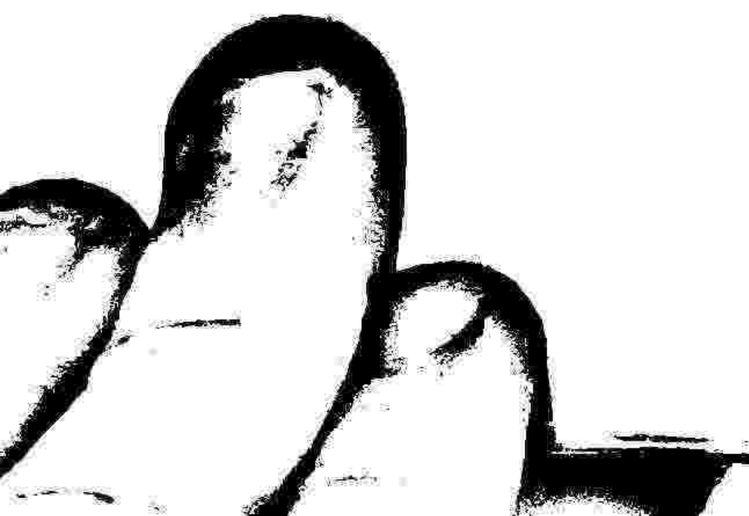
So, with painstaking detail we feel we have demonstrated the validity of our hypotheses. With the Hill, Clayton and Webster Groves we have observed very old housing stock either appreciating considerably in value or maintaining the very highest relative value ranking over four decades of intense downward pressure on relative prices of older stock; and in all of these cases we have observed appreciating value following appreciation in decile rank, or relative value maintained at a high level along with sustained high socio-economic levels. Even in Soulard-Lafayette -- an exhausted housing stock of true antiquity -- we observed temporary upward movement of values following ephemeral upward shifts in decile rank. Established here is that age of housing is not a reliable index to



to socio-economic level or housing value nor is it commonly of relevance in determining such levels. At the same time, the areal income level emerges as the most impelling factor in setting value levels.

In two of the clustered communities -- Maplewood/Richmond Heights and Walnut-Riverview/Jennings/Baden -- we observed that of the neighborhoods with significant degree of shift to black population -- Walnut-Riverview and Richmond Heights -- the one case maintained its decile rank and continued to appreciate in absolute value while the other maintained a high neighborhood ranking of 3rd place. At the same time, Maplewood, which remained all-white, fell severely in decile rank and in all measures of relative value. Established here is that, in and by itself, increase in the black component of neighborhood population is not statistically linked to decline in either socio-economic or housing-value level, while maintenance of an all-white population does not insure against such falling levels. Again, in these cases, maintained high value was associated with sustained decile ranking; falling values were associated with falling rank. (Parenthetically, with Kinloch, we observed the case of an all-black community of extremely low decile rank and low-quality housing stock where the sequence of terminal loss of value, decay and abandonment has been averted, apparently through the operation of some internal societal integrity.)

Finally, we have demonstrated the relevance of proximity to transition both negatively (Affton, Webster Groves) and positively -- the cluster described immediately above, the West End/Wellston/University City/Normandy. Again, what we have observed in this latter case is that immediate spatial contiguity to a time-sequence of falling rank/falling value inspires locally the same sequence -- a drop in socio-economic level followed by a drop in values.

In the light of all this, we feel confident in asserting the following:

> Neither age of housing stock nor changing racial character of the neighborhood has, in and by itself, any causal relationship to the succession process.
>
> The reranking of housing values is a function and a consequence of change in the neighborhood socio-economic level; the movement is most often a downranking following a drop in income, but has also been observed to be an upranking, after a rise in income.
>
> A neighborhood in immediate proximity to one which is experiencing or has experienced the downranking sequence will, unless external constraints are imposed, experience the same succession sequence.

Taken together, the last two postulates above are the fundamental principles of the arbitrage model. We will now demonstrate its functioning.

D. The Arbitrage Process in Action

To depict the arbitrage process in close detail,we will now further divide three of our sample communities into sub-areas for analysis. If, as we have postulated and thus far substantiated, income-change does follow a moving boundary it may well be the case that the boundary influences only part of a community rather than all of it. Also,arbitrage may sometimes be slowed or stopped by natural or man-made barriers that block its extending influence. These ideas, as well as the general model itself, we will now subject to close scrutiny in a small scale examination of movement within Webster Groves, Normandy, and University City.

The implications of this investigation are of wide significance: if the arbitrage model and its moving boundary offer an accurate paradigm of urban transition, then we must expect major change to occur in areas bordering on other areas where transition is underway or has been consummated.

University City

In University City the disaggregation was effected by using elementary school districts, which are excellent for the purpose in that they define areas relatively homogeneous in income as well as type and quality of housing. Figure 9 shows the location of the districts, which for analytic purposes we divide into three groups:

NORTH
Defined on its southern limit by Olive Street Road, a major east-west arterial with substantial commercial development, and comprising districts P, UF, NH, DB and G.

CENTRAL
From Olive Street Road to Delmar Boulevard, also a major east-west arterial but commercialized only along its eastern segment. Comprised of districts DH, JP and BL.

SOUTH
From Delmar south to municipal limits and comprising districts FP and MK. In this area housing generally is characterized by private streets with very limited access.

Thus the three areas are clearly defined by man-made demarcations.

Figure 10 shows the census tracts for the same school-district areas: our Central set of districts, of course, is largely carved from the center of the tracts; its defining boundaries of Olive Road and Delmar are shown as dotted lines.

Now from Table 7 we observe that the lowest housing values in University City are in Tract 2160, where the North set directly abuts the main thrust of transition outward from the city; in ascending order, the next lowest are Tracts 2157, 2159 and 2161.* (All of these tracts are marked with a double asterisk in Table 7, indicating that they are contiguous to areas of transition). The fact

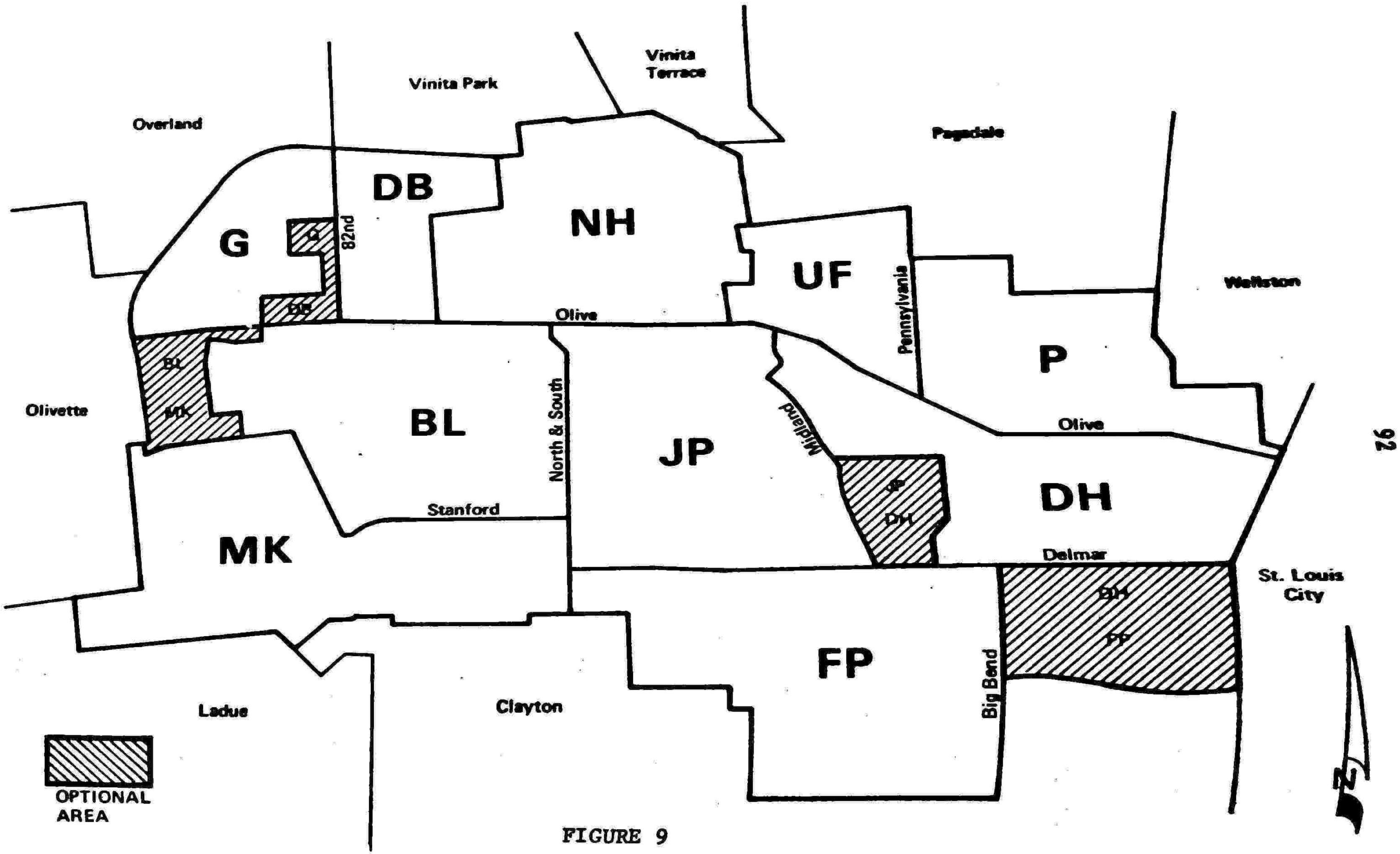


FIGURE 9
UNIVERSITY CITY
BY SCHOOL DISTRICTS

is that the entire North set of districts (and blending into the northern part of the Central set) had at all times represented housing of more modest scale and quality than that in the South set and the southern part of the Central set. The North set, that is, was precisely the classic "boundary area" which we described in Part One of this study and presented diagramatically in Figure 1. Along the entire northern border lay the "low-income" area of our arbitrage paradigm, to the south the "high-income" area.

Now, for our most revealing statistics regarding University City, we return to the binomial probability test regarding the number of changes in income decile rank of occupants which we discussed earlier. In Table 8 we see that in the North set, the number of changes (and particularly of changes downward) is fantastically higher than could be expected from chance, whereas in the Central and South sets the number is statistically insignificant. The number in the North set is so high, we observe, that it weights the reading for the total of all sets to a similar level of zero probability.

This is exactly the result anticipated from the arbitrage model, since the North set falls within the major thrust of low-income transition from the city through the West End, Wellston and Normandy. A close study of Table 7 will

*Persons familiar with the area will be surprised at the high status-levels shown for Tract 2161, particularly in relation to Tract 2162. Certainly, from every standpoint, an "eyeball" estimate would place 2161 relatively much lower. The anomaly in the calculation almost certainly arises from the fact that all student occupants were eliminated from the data base. Tract 2161 has a very high student population, whereas Tract 2162 is almost devoid of student-occupants. The effect would be to skew the reading for 2161 on the high side, whereas 2162 would share with all other tracts the general skewing on the low side which is noted elsewhere.

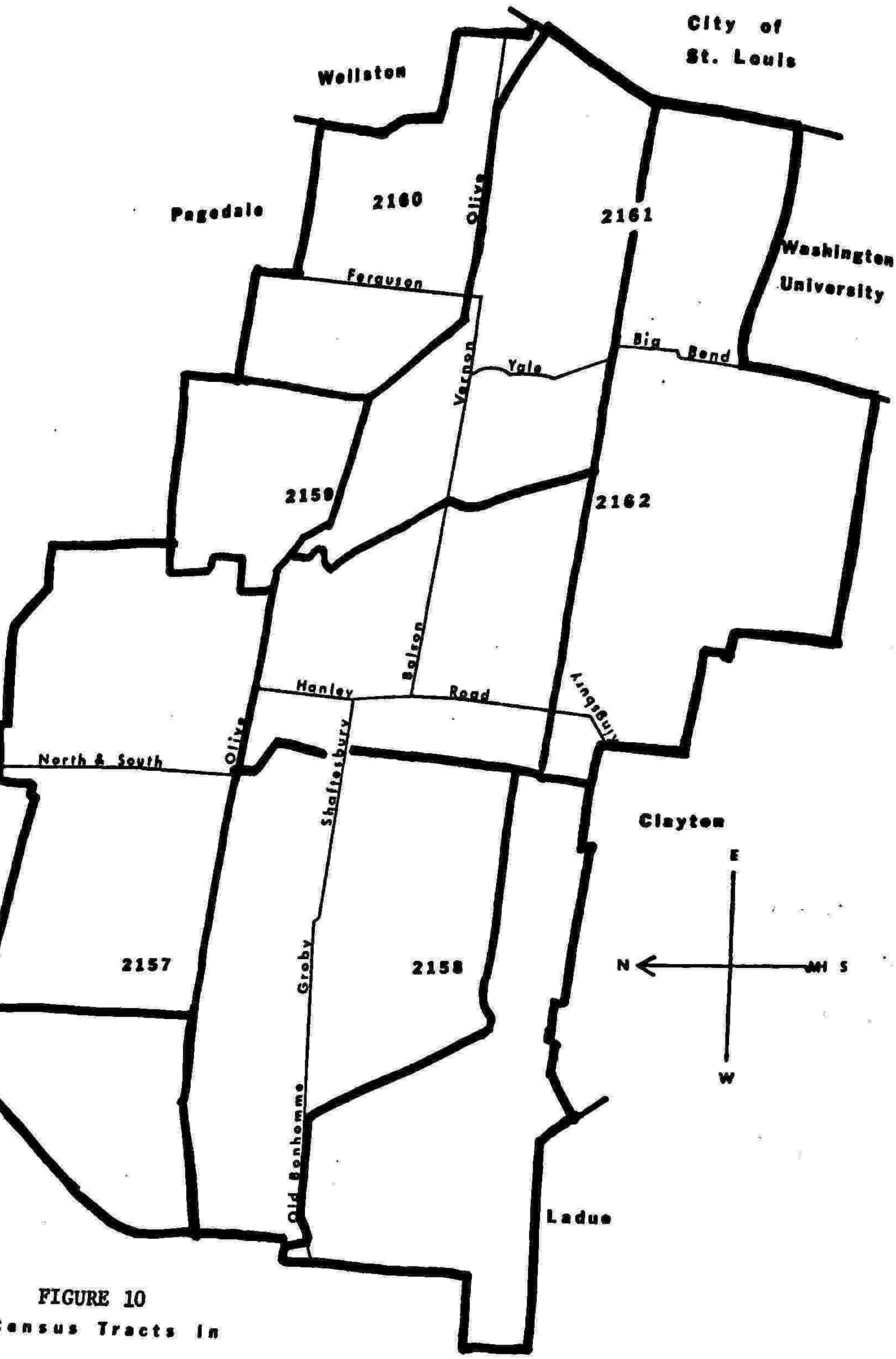


FIGURE 10

Census Tracts In

University City

Tract Boundaries - light lines

School District - heavy lines

Table 7

MEDIAN VALUE, RELATIVE VALUE AND DECILE RANK FOR SELECTED CENSUS TRACTS* AND YEARS

Census Tract	Year	Decile Rank	Year	Median Value	Relative Value
		Normandy			
2122					
	1949	8	1950	$10,690	120
	1959	7	1960	13,500	105
	1969	7	1970	14,700	90
2123					
	1949	8	1950	$16,907	190
	1959	8	1960	18,400	143
	1969	7	1970	20,400	125
2136					
	1949	7	1950	$ 8,726	98
	1959	7	1960	11,900	92
	1969	6	1970	13,400	82
2137					
	1949	9	1950	$13,843	155
	1959	8	1960	14,800	115
	1969	8	1970	18,600	114
2138**					
	1949	7	1950	$10,357	116
	1959	7	1960	11,700	91
	1969	5	1970	13,100	80
2141**					
	1949	6	1950	$ 8,461	95
	1959	5	1960	10,100	78
	1969	4	1970	10,800	66
2142**					
	1949	6	1950	$ 8,847	99
	1959	7	1960	12,100	94
	1969	5	1970	13,200	81
2143					
	1949	6	1950	$11,039	124
	1959	7	1960	12,800	99
	1969	7	1970	14,300	88
		University City			
2157**					
	1949	9	1950	$11,983	134
	1959	8	1960	16,000	124
	1969	7	1970	15,000	92

Table 7 (Continued)

Census Tract	Year	Decile Rank	Year	Median Value	Relative Value
2158					
	1949	10	1950	$20,000+#	#
	1959	8	1960	25,000+#	#
	1969	8	1970	24,900	153
2159**					
	1949	8	1950	$13,869	155
	1959	7	1960	16,400	127
	1969	6	1970	16,000	98
2160**					
	1949	6	1950	$ 8,578	96
	1959	7	1960	11,600	90
	1969	5	1970	12,100	74
2161**					
	1949	10	1950	$18,290	205
	1959	10	1960	20,600	160
	1969	7	1970	23,700	145
2162					
	1949	9	1950	$20,000+#	#
	1959	8	1960	22,800	177
	1969	8	1970	24,300	149
Webster Groves					
2190					
	1949	-	1950	$ 3,867	43
	1959	-	1960	9,800	76
	1969	-	1970	12,900	79
2191					
	1949	9	1950	$12,599	141
	1959	9	1960	14,600	113
	1969	10	1970	16,600	102
2192					
	1949	10	1950	$16,470	185
	1959	10	1960	19,200	149
	1969	10	1970	24,200	148
2193					
	1949	8	1950	$11,503	129
	1959	7	1960	14,600	113
	1969	8	1970	16,700	102
Entire SMSA					
	1949	NC	1950	$ 8,919	100
	1959	NC	1960	12,900	100
	1969	NC	1970	16,300	100

Source: Census of Population and Housing for 1950, 1960 and 1970 and income decile data compiled for this study.

*Tracts are not exactly comparable across years but are as equivalent as possible.

**Census tracts contiguous with areas of decile rank transition.

#Falls in an open-ended class, no median computed.

-No data available.

NC not computed.

show the same remarkable degree of difference between the North set and the Central and South sets in terms of value-levels.

We also observe from Table 7, however, that the lowest decile rank reached was exactly at mid-rank, a 5, while the lowest relative value reached is 74 (both in Tract 2160), higher levels being sustained both in the tracts only proximate to change and, of course, in the "high-income" sectors to the south. This arrest of the depletion sequence was due to jurisdictional constraints imposed by University City authorities, and it will be considered later in this report.

These constraints also helped to buffer the southern sections; but it is notable that, even to the degree transition was experienced in University City, the physical obstacles presented by the arterial streets dividing the sets of school districts, and the further barrier of the closed streets south of Delmar, had evident impact in confining the transition. These factors together enabled University City, although in direct line with the moving front, to emerge from the period in a neighborhood value-ranking second only to Clayton.

Normandy

Normandy, a school district, was for this analysis disaggregated into five groups of small municipalities, shown in accompanying Figure 11. Referring to Table 8, we quickly see that again it is only the areas that directly abut the city transition zone (the sections labeled Northeast and Southeast) which experienced highly significant numbers of income downranking. Also, that the area immediately to the west of these, and therefore in line with the continuing thrust of change, (North Central) experienced measurably high downranking as well, but at a less significant level.

TABLE 8

DECILE RANK CHANGES BY NEIGHBORHOOD SUBAREA*

Subarea	Number of Units in Which Income increased	Income decreased	No Change or Change Unknown	Sample Size	Probability[a]
UNIVERSITY CITY					
North	26	109	19	154	0.000[b]
Central	16	20	19	55	0.309
South	7	11	13	31	0.240
Total	49	140	51	240	0.000[b]
NORMANDY					
Northeast	10	24	35	69	0.012[b]
Southeast	9	20	23	52	0.031[b]
North Central	13	22	32	67	0.088[c]
Northwest	4	6	12	22	0.377
South Central and Southwest	11	17	32	60	0.172
Total	47	89	134	270	0.000[b]
WEBSTER GROVES					
Northwest	2	13	2	17	0.003[b]
South	17	9	21	47	0.962
Central	5	1	3	9	0.984
Northeast	13	11	9	33	0.729
Total	37	34	35	106	0.640

*Refer to Maps for boundaries.

[a]The probability of drawing a random sample from a population in which $P_x = P_y = 0.50$ and of finding a distribution equal to or more extreme than the one shown.

[b]Null hypothesis ($P_x = P_y = 0.50$) rejected at 0.05 level of significance.

[c]Null hypothesis ($P_x = P_y = 0.50$) rejected at 0.10 level of significance.

We then observe, from Figure 11, that all the remaining sections of Normandy, where no significant change is observed, were protected behind large land areas of non-residential character which acted as barriers to the moving front of arbitrage.

We show no map of census tracts for the Normandy district comparable to Figure 10 for University City, but in Table 7 those tracts representing the sections labeled Northeast and Southeast on Figure 11 -- that is, Tracts 2138, 2141 and 2142 -- are marked with a double asterisk, indicating their contiguity with areas of transition.

We then observe from Table 7 that only the tracts so designated experienced decile downranking by two ranks, while all of the protected areas were stable, moving down only by one rank or, in one case (Tract 2143) moving up in rank. We see also that relative housing values followed suit.

Again, these aspects of transition and stability are exactly what would be postulated by the arbitrage model.

Webster Groves

Referring back to Figure 2 and to the preceding text regarding Webster, we recall that this community is one of the most isolated from transition of the 15 in our sample. It presents us with a special case and enables us to make a further observation about the operation of arbitrage.

As shown in Figure 12,we disaggregated Webster Groves for this analysis into four neighborhoods. Each is roughly homogeneous in terms of housing age, density and value. The sub-area of particular interest here is the one labeled Northwest,

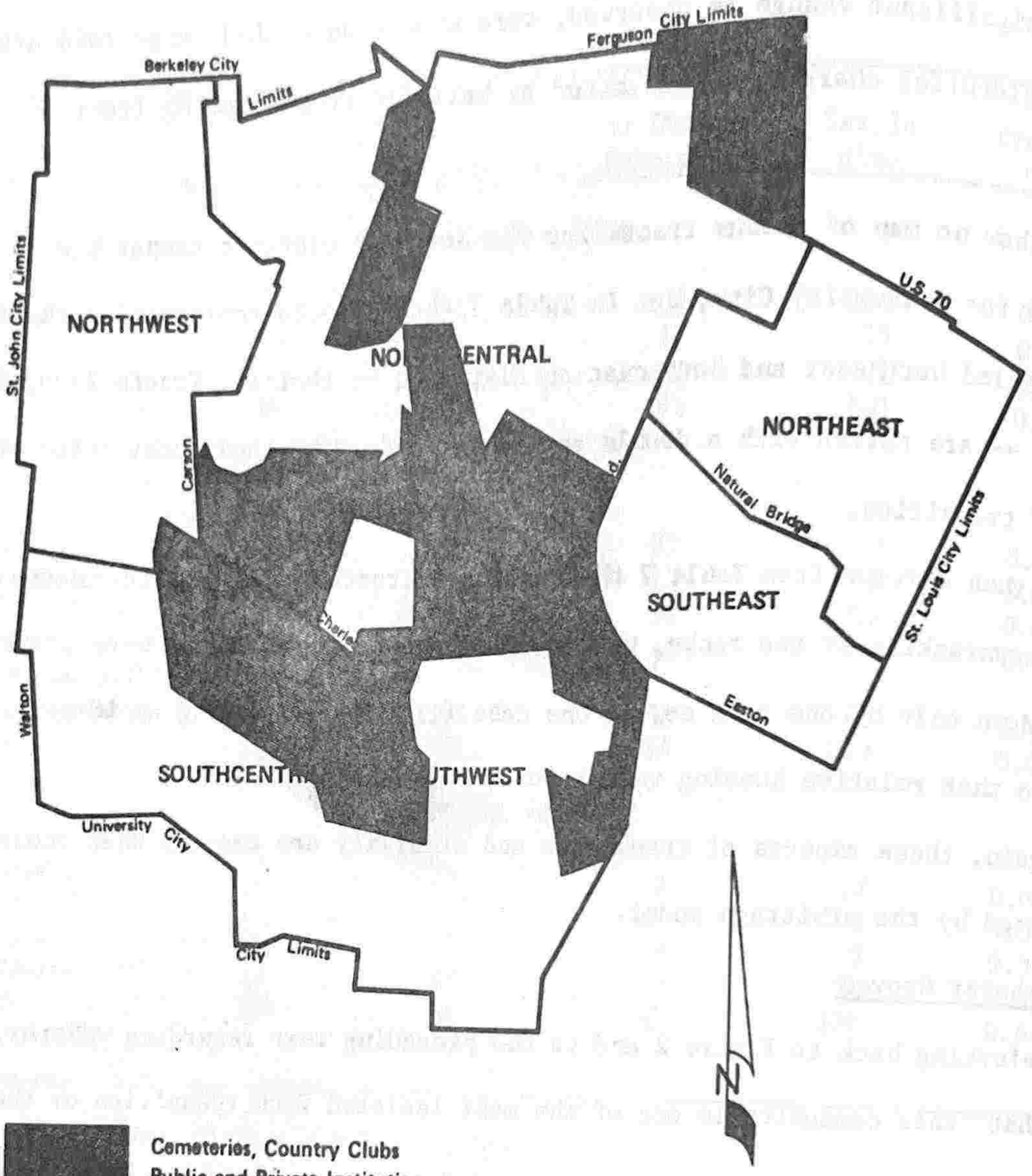


FIGURE 11
NORMANDY SCHOOL DISTRICT
BY GROUPS OF MUNICIPALITIES

which has existed since the beginnings of the community (circa 1870) as a black residential area originally for servants of middle- and upper-income families in Webster Groves.

Northwest is the only sub-area to show statistically significant decile rank decline (Table 8) in this high-income municipality which overall registers in the top decile rank (Table 1). Of the other three sub-areas, one shows no significant change, while two increased.

The barrier separating Northwest from the other sub-areas is, classically, a railroad track. Interestingly, we observe (Table 7) that here socio-economic decline is not matched by declining value: values within the corresponding census Tract 2190 more than tripled absolutely between 1950 and 1970 and almost doubled relative to the SMSA median (although of course they remained far below values in the remainder of the community).

This case offers support for the postulate that a small area of isolated decline in socio-economic level does not affect contiguous areas in the same way as the moving front of a massive migration, and that in fact there appears to be an inverse impact on values from the high level of the surrounding community. Arbitrage, in short, does not operate in miniature: it is a model of whole-neighborhood transition, of large-scale urban change.

. . . . . .

In this section we have described the overall dimensions of the contemporary succession process. We feel we have established these to be a spatial and time sequence in which a geographically moving front of decile rank, and presumably income decline is followed in time by a commensurate decline in housing value,

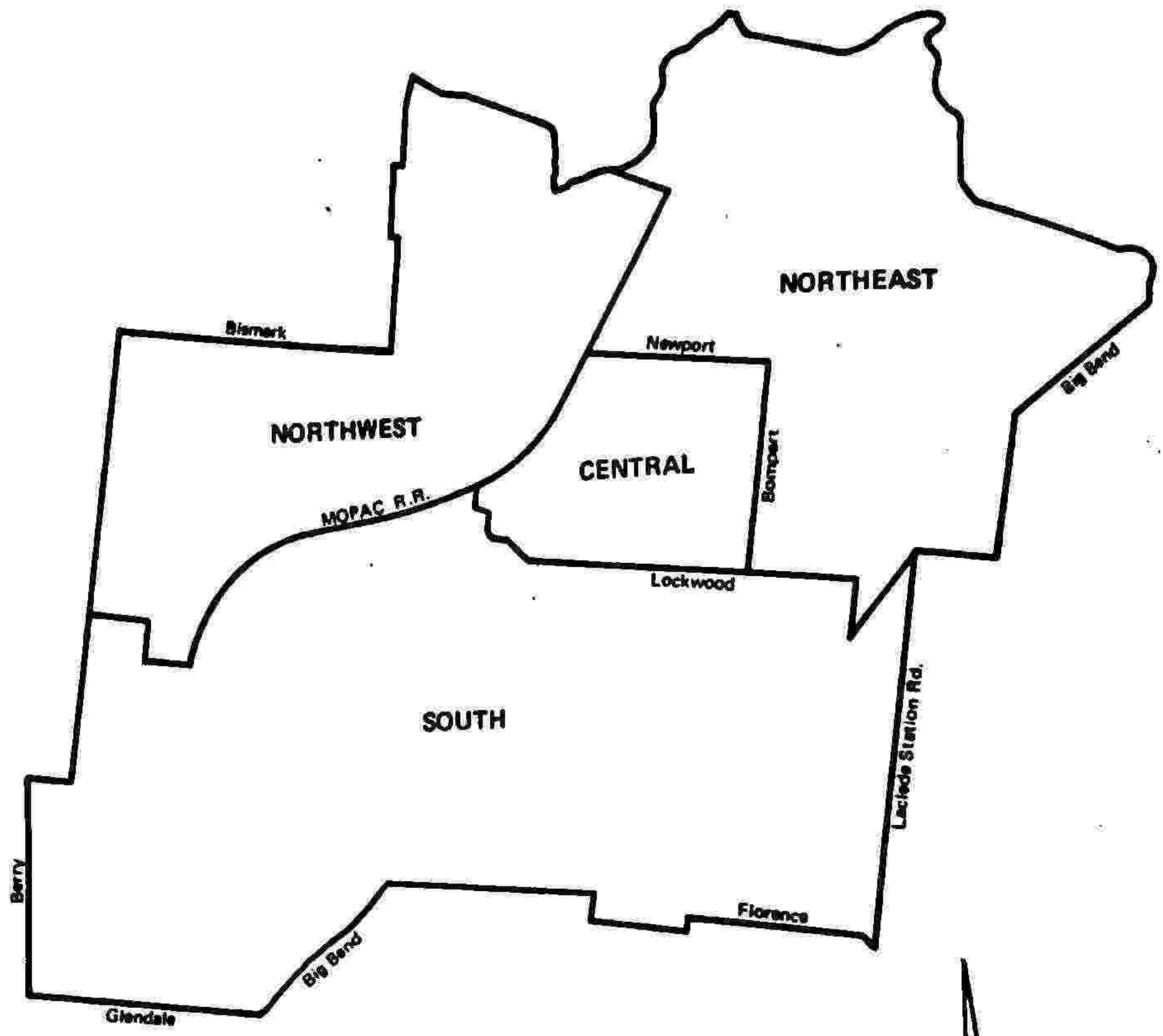


FIGURE 12
CITY OF WEBSTER GROVES
BY NEIGHBORHOODS

which if unchecked leads to decay and abandonment. We have also suggested, and will later demonstrate, that in its later stages, as the process gathers impetus, it develops an internal dynamic of expectation, so that both spatially and on a time-scale values may fall <u>before</u> socio-economic status has declined. This entire process we call arbitrage, and it may be characterized as describing the mechanism of succession, a model of <u>how</u> it takes place.

In the following sections, it may be said that we turn our attention to a consideration of <u>why</u> succession takes place. It takes place because people have very definite preferences about their housing, and because they act on the basis of these preferences. In the following Section 2, our purpose is to identify the nature and weighting of household preferences, while in the subsequent Section 3 we will show how these preferences are manifested in the housing market as patterns of human behavior.

Chapter 2

PREFERENCE, THE MOTIVATIONAL BASE OF TRANSITION

To set the framework for this section of our evidence, let us briefly return to the theoretic discussion of "filtering" from Part One. We asserted there that it is households, not the physical properties themselves, that experience reranking in the degree and value of housing's utility. This reranking, we said, may be upward or downward; and it may take place actively (a voluntary move by the household) or passively (largely through the actions of other households). Thus, the entire construct of filtering -- whose present day manifestation we have just demonstrated as arbitrage -- is set in motion and kept operational by the actions of people. These householder actions, in turn, are the culmination of a decisional process in which householders weigh the funds at their disposal and their housing preferences against the array of housing stock available to them and attempt to find a match. Inevitably, then, the housing market -- housing prices -- will reflect household preferences.

But we have also asserted that these preferences are not as simplistic as in the traditional view. Obviously, certain physical attributes (size and structural soundness) are basic to a family's decision; but beyond that we have postulated a whole complex of present and future considerations that figure to some degree in householder decisions. In fact, because at any time a large number of available properties will answer to the family's physical requirements, we have asserted that some of these other components of what we call "the housing bundle" will figure to a greater degree than physical considerations in the final decision. Now, if our analysis of housing preferences is to be consistent with the model of

neighborhood transition we have just demonstrated, it is clear that income-level of the neighborhood must be shown to be such a heavily weighted component, and one of primary importance since we have identified that factor as the prime determinant of neighborhood housing values.

Our present purpose, then, is to present evidence demonstrating the preferential weighting of the several components of the housing bundle, and in this effort we face a problem in analysis. Put most simply, it is that the actual price differentials which are realized in the market between housing alternatives will indeed reflect and preserve the preference ordering between these alternatives, but they will not necessarily reflect the intensities of preference components. So the testing of our hypotheses regarding household preferences cannot be an easy or simple procedure. In the following, we use three methods of analysis in dealing with this single problem: the three will be found to be internally consistent in their results and, further, consistent with the model of transition presented in the preceding section. However, the findings of the present section also make a significant new contribution to our understanding of the dynamic of arbitrage: that is, they clarify the importance and the role of the expectation component of the housing bundle.

In the three following subsections, it will be seen that we move progressively into a deeper level of detail. The first is a cross-section analysis of housing sales during 1970, where the statistical base is the available data regarding the properties sold. The second is an analysis of specific household moves, where we are able to contrast data between the evacuated housing and the housing newly

occupied. In the third, where the approach is a technique of personal interviews with householders, everything is detail, and the problem is to isolate the most relevant responses.

A. A Cross-Section Analysis of the Structure of Household Preferences*

Under fairly general conditions, the ordering of units by price will coincide with a household's ordering of these units in terms of preference. The intuitive sense of this assertion is easily seen: given a choice between two units, a household will choose to purchase the more expensive only if it prefers it to the less costly. The general hypothesis that we consider in this section is that this preference ranking, as mirrored in prices, is a function of calculable components of the housing bundle. Specific postulates we are testing here are that high socio-economic status has preferential primacy among neighborhood components and that it ranks above age of housing. Finally, we are testing the relationship between these measures of preference and racial composition.

In the course of our investigations for this study we made observations of some 30,000 sales of owner-occupied, single-family dwellings in St. Louis and St. Louis County over the period 1961-71. Of this total, some 3,400 individual sales were recorded in 1970 and it is these that provide the sample for our immediate cross-sectional analysis. These were drawn from over 80 census tracts in 47 communities within the SMSA. Age of housing ranges from one to 85 years, percentage nonwhite from zero to 99.3 percent, median income from $2,000 to $25,000

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*This sub-section is based on "Residential Preferences, Neighborhood Filtering, and Neighborhood Change," by James T. Little of Washington University, to appear, Journal of Urban Economics.

and housing price from approximately $8,000 to $55,000 with the mean at about $17,000. While this price range excludes the upper portion of the market, it does include a sizable portion of the entire SMSA housing market. Thus our sample is a representative cross-section.

Table 9 shows the classifications and sources of the data base for our analysis, and it will be seen that the characteristics of the housing bundle fall into three groups: structure, neighborhood, public sector, and access.

(The reader is cautioned that this test utilizes a quite technical methodology and can only be sketched here in its broadest manipulations. He should not be dismayed if some of the following remains opaque to his understanding: the findings are presented in non-mathematical terms).

Three further observations need to be made concerning Table 9. The first is that the "access" attributes of the housing bundle (that is, nearness to employment, shopping, recreation, etc.) are omitted in the discussion of the results. This omission was not made prior to the test but rather after it had become evident that these characteristics had no statistical significance, a fact we attribute to the wide dispersal of employment and shopping centers in the St. Louis SMSA and to the achieved status of an arterial thruway ring-and-grid system attained by 1970.

The second notable aspect of Table 9 is the inclusion of "percentage non-white in adjoining tract" among neighborhood characteristics. This, as it turned out, became our most significant measure of the expectation component, but originally there were other reasons for including this element. As we have noted, the price of a unit of housing includes both its present and future stream of value.

TABLE 9
HOUSING BUNDLE COMPONENTS

Price Variables
- Market Price (a)
- Real Property Taxes (d)

Structural Characteristics
- Total usable area of unit (LIVAREA)(a)
- Number of rooms (ROOMS)(a)
- Bedrooms (BEDROOMS)(a)
- Baths (BATHS)(a)
- Total area of parcel (LOTSIZE)(a)
- Full basement dummy (JBMST)(a)
- Central air-conditioning dummy (AIR)(a)
- Age of Structure (YEARSOLD)(a)

Neighborhood Characteristics
- Percentage of total population non-white (NW%)(b)
- Highest percentage non-white adjacent tract (NWADJ%)(b)
- Percent all households with female head (FHD%)(b)
- Percent all employed population not employed as professionals or supervisors (BLUE%)(b)
- Median income of families and unrelated individuals (MEDY)(b)
- Median school years completed (MEDSCYR)(b)
- Percent population less than 20 (POP20%)(b)
- Percent all units vacant year round (VACYR%)(b)
- Percent units constructed before 1939 (PC39)(b)

Public Sector Characteristics
- Expenditure per pupil (EXPPUPIL)(c)
- Pupil-teacher ratio (c)
- Crime rate -- crimes per thousand population (CRIMERATE) (e,f)

Access Measures
- Peak house travel time to nearest major employment center (WTIME)
- Non-peak travel time to nearest major commercial center (STIME)

Sources: (a) Real Estate File of the St. Louis Office, Federal Housing Administration; (b) Census of Population (1970) and Census of Housing (1970); (c) School District Annual Reports; (d) Assessors' Municipalities, St. Louis County Department of Planning; (f) St. Louis Police Commission.

Now, with a realistic discount rate, changes occurring over a long period can have little effect on value; but in our other work we have observed that neighborhood characteristics can change very rapidly, and that they do so on a basis of proximity to change on a neighborhood scale. We have shown that this loss of value is most closely associated with declining income-level; but since, in the St. Louis SMSA, "low-income" is closely identifiable with "nonwhite", our most readily accessible measure for this possibility of value-loss was the census data for percentage of nonwhite in the adjoining tracts.

Our third observation regarding Table 9 also involves the future value stream: this is the inclusion of property taxes computed over a standardly assumed 50-year life of the unit. We have calculated property taxes at their present value in real dollars (that is, on the assumption that taxes will remain constant in real terms, relative to inflation or depression) adjusted by a real discount rate of 3.5 percent. This total tax figure plus the selling price becomes gross price, the dependent variable in our equations.

The test procedure

The simplest way to test our hypotheses would be to estimate the relationship between gross price and each associated housing characteristic in the following form:

$$V = a + b_1X_1 + b_2X_2 \cdots$$

where V = price plus taxes, or gross price

a = constant

b_1 = weight associated with characteristic 1

X_1 = level of characteristic 1

and the same for b_2, X_2, etc.

However, many of the characteristics are highly associated with each other, so if all were included in the estimating equation at the same time it would be impossible to isolate the impact of any single component on value. To solve this problem, we constructed indices which measured simultaneously groups of characteristics, using factor analysis, a statistical technique which identifies those characteristics most associated with each other.

As shown in Table 10, five factors (or composite indices) were developed. Roughly speaking, Factor 1 is a measure of neighborhood socio-economic status, although it also measures some structural characteristics, most notably age of dwelling units. Factor 2 is a straightforward measure of structural characteristics. The third factor is strongly related to median income, educational attainment of neighborhood residents, and expenditure per pupil, and can be considered a measure of the demand for education, broadly defined. Factor 4 measures neighborhood and adjoining-neighborhood racial composition, while Factor 5 is an index of population age-distribution. We have thus created five new "artificial" variables which contain the information provided by our original twenty.

The next step was to estimate the relation

$$V = a + b_1F_1 + b_2F_2 + b_3F_3 + b_4F_4 + b_5F_5$$

The estimate was

$$V = 21{,}279.2 - 4{,}716.6\ F_1 + 4{,}668.6\ F_2 + 5{,}393.7\ F_3 - 2{,}157.4\ F_4 + 2{,}236.4\ F_5$$

The equation explains 70 percent of the variation in the gross prices of housing and each of the variables contributes significantly to the explanation.* As

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*By "significantly" we mean that the probability that the 'true' value of the coefficient is zero or of opposite sign to that estimated is no greater than 0.05. For this equation, those probabilities were less than 0.01.

TABLE 10

Factor Load Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
LIVAREA	0.23724	0.88383	0.08748	0.00557	-0.08658
ROOMS	0.00184	0.94404	0.04977	-0.01488	-0.01754
BEDROOMS	0.06223	0.83749	-0.01155	-0.06501	0.04410
BATHS	-0.06616	0.58889	0.06436	-0.14957	0.17284
BLUE%A	0.48279	-0.15666	-0.73439	0.28469	0.00340
NW%A	0.55426	-0.01744	-0.09643	0.68660	0.06026
NWADJ%A	0.43649	-0.03239	-0.26785	0.64948	-0.10773
VACYR%A	0.72975	0.19938	-0.15306	0.16129	0.08162
FHD%A	0.82720	0.05127	-0.18071	0.40010	-0.18489
PC39A	0.64790	0.02248	-0.31492	0.32034	-0.46078
RENT%A	0.85327	0.14183	-0.04689	-0.06578	-0.18914
MEDYA	-0.67785	0.14871	0.41744	-0.23163	0.36498
JBSMT	0.C7600	0.00774	-0.01674	0.06576	-0.15150
LOTSIZE	-0.33077	0.22548	0.27988	-0.25120	0.25113
YEARSOLD	0.60445	0.04356	-0.21977	0.28392	-0.34533
AIR	-0.32200	0.18287	0.16556	-0.20186	0.26978
POP20%A	-0.06836	0.10200	-0.20504	0.10751	0.81459
MEDSCYR	-0.48159	0.13376	0.67479	-0.18204	0.37789
EXPPUPIL	-0.06713	-0.00982	0.59758	0.09689	-0.15167
CRIMRATE	0.01294	-0.12664	0.06585	0.19968	-0.05064

expected, above-average numbers of rooms and living area lead to increases in gross price (Factor 2), and above-average percentages of nonwhite residents in the same or adjoining tracts is associated with lower gross prices (Factor 4). Factor 1 requires more comment. It is weighted most heavily by percent renter-occupied and is negatively weighted by median income. They associate in opposite ways with price. Above-average proportions of renter-occupied units in a neighborhood lead to lower prices, while above-average median family income would lead to higher prices. Thus, the negative sign of the coefficient of this factor is as expected.

Since there is a known relationship between each of the twenty original variables and the five new variables, we can retrace our steps and use the values estimated in the above equation to obtain an estimate of the relationship between gross price and the original variables. These coefficients are summarized in Table 11.

We note first that all the coefficients per standard deviation of Table 11 have the sign (negative or positive) we would expect from our hypotheses. Living area, number of rooms, number of bedrooms, number of baths — all have positive coefficients reflecting the implicitly greater value of larger area and better facilities. Percent renter-occupied units, percent nonwhite, and percent nonwhite in adjoining tract — all these have negative signs reflecting their depressing effect on value, as predicated by the arbitrage model. Again, we note that these latter variables reflect both <u>current</u> and <u>impending</u> social character of the neighborhood: the percent nonwhite in adjoining tracts provides signaling as to the future of the tract under study, while the percent of renter occupancy is an indication of the speed with which change may occur.

TABLE 11

COEFFICIENTS AND TRADE-OFF RATES OF HOUSING CHARACTERISTICS

Estimated Coefficients of Characteristics

Characteristic	Sign	Coefficient	Coefficient per Standard Deviation
1. LIVAREA	Positive	6.9	3287
2. ROOMS	Positive	3684.9	4680
3. BEDROOMS	Positive	3944.7	3826
4. BATHS	Positive	9242.4	4115
5. BLUE%	Negative	-47.2	-7557
6. NONWHITE%	Negative	-164.4	-4564
7. NONWHITE ADJ%	Negative	-137.8	-5231
8. VACANT YR%	Negative	-922.7	-3488
9. FEM HEAD%	Negative	-794.3	-5878
10. CONST PRE 39%	Negative	-202.2	-6369
11. RENT%	Negative	-237.0	-3898
12. MEDINC	Positive	2.5	7478
13. BASEMENT	Negative	-3087.0	-926
14. LOTSIZE	Positive	1.2	5243
15. YEARSOLD	Negative	-252.3	-5199
16. AIR	Positive	9113.2	4283
17. POPLT20%	Positive	156.0	1189
18. EXPPUPIL	Positive	23.5	2967
19. CRIMERATE	Negative	-5.4	-823
20. MEDSCYR	Positive	5202.7	7726

TABLE 11
(continued)

TRADE-OFF RATES BETWEEN
SELECTED COMPONENTS

	Characteristic	Rate
(a) Per $1000 MEDINC	ROOMS	.68
	NONWHITE	-15.21
	NONWHITE ADJ	-18.14
	VACYR	-2.71
	YEARSOLD	-9.91
	EXPPUPIL	106.38
	LOTSIZE	2083.33
(b) Per 10 years YEARSOLD	LIVAREA	-365.65
	ROOMS	-.68
	NONWHITE	15.35
	NONWHITE ADJ	18.31
	CONST. PRE 39%	12.48
	EXPPUPIL	-107.36
	LOTSIZE	2102.50
(c) Per 10% Non-White	LIVAREA	-238.26
	ROOMS	-.45
	EXPPUPIL	-69.96
	CRIMERATE	304.44

The most important result to emerge from this analysis is a confirmation of our hypothesis that economic and occupational status of the neighborhood -- as measured by the median income, percent blue-collar, and median school years completed -- is the most heavily weighted component in households' evaluation of alternative living situations. This is shown most sharply in column 3 of Table 11, the coefficient per standard deviation of the variable. Each of our economic and occupational-status variables is at least 17 percent larger than the coefficient for any other variable. The importance of neighborhood income relative to racial composition is clear: a decrease of one standard deviation in median income ($3,000) is equivalent to an increase of 1.6 standard deviations (about 45 percent) in the percent nonwhite. These and similar comparisons are shown in the second part of Table 11.

Let us further interpret our coefficients in terms of their actual impact on market values. For example, consider the first coefficient in our table: if a house is the same as others with respect to all characteristics except that it is one standard deviation larger than the average (about 476 square feet larger), the gross price will be about $3,287 more. Or (Item 6), if we place the same housing bundle in two neighborhoods where one has the mean percent of non-white occupancy (18.8 percent) while the other has one deviation more (27.8 percentage points more nonwhite occupancy) gross price will be about $4,564 less in the latter neighborhood. But now look at Item 7: gross price will decline more with a one-deviation difference in percent non-white occupancy in <u>adjacent</u> tracts -- over $5,200! This was the unexpected and insightful finding of our analysis, and we shall return to this revelatory observation more than once.

Almost equally revelatory is the negative magnitude of Item 11, percent of renter-occupied units -- a drop of over $3,900 in value for each unit of deviation from the mean. The intensity of these two components recalls our discussion in

the preceding section to the effect that householders are particularly sensitive to "changes in the wind," and most acutely sensitive to anticipated changes in neighborhood characteristics: both of these heavily-loaded characteristics we have identified as impacting on the immediately future value-stream. In these coefficients we see expectation translated into maximum dollars of value depreciation.

Finally, we observe in Item 12 of Table 11 the overwhelming impact of income-level on neighborhood values: the same housing bundle will have a gross price about $7,478 higher in a neighborhood where the median income is one deviation higher than the mean. Thus, income-level, together with occupational and educational status, carries the highest intensity of the components.

With the derived coefficients of Table 11, we are enabled to perform an interesting numerical exercise which ties together our present analysis of the weighting of housing-bundle characteristics with the analysis of transition in specific St. Louis neighborhoods we conducted in the preceding section. Let us consider a hypothetical housing unit of average structural characteristics and assessed valuation. Assume that this unit can be placed in any of the five neighborhoods described in Table 12; the resulting price differentials of the unit, as predicted by our statistical work, are detailed in Table 13.* On the basis of neighborhood characteristics alone (the first four items of Table 12), the unit would be worth $12,500 less in Wellston than it would be in Clayton, with progressively smaller differentials for Jennings, northern University City and southern University City. On the basis of school expenditure, the unit would be

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*The zero values for Clayton in Table 13 do not signify that the Clayton value is to be construed as the "mean" of the coefficients presented in Table 11. It is merely that, for clarity, the other neighborhood values are shown in relation to the Clayton value, which of course represents a maximum.

TABLE 12

CHARACTERISTICS OF SELECTED COMMUNITIES AND NEIGHBORHOODS

	Jennings Tract 2121	Wellston Tract 2140	University City Tract 2159	University City Tract 2162	Clayton Tract 2164
% Renter Occ.	22	40	12	33	50
% Nonwhite	0	73	39	5	1
% N.W.Adj.Tr.	73	98	73	39	5
Median Income	10,035	6,781	10,025	12,173	16,792
Annual Taxes*	427	495	544	544	398
Exp. Pupil	1,020	936	1,106	1,106	1,700

*Total Municipal and County taxes assuming assessed valuation of $6,000.

$1900 less in Wellston, $1675 less in Jennings and $1475 less in University City. We see next the impact of Clayton's large nonresidential tax base, with resultant lower personal property tax rates: here the differential reaches a maximum $3,350 in University City (which has the highest tax rate). The totals of these differentials reach remarkable levels -- a maximum of $16,000 less value for the identical housing structure in Wellston than in Clayton. Here we see revealed the important role of neighborhood characteristics in explaining housing price differentials.

Thus the derived coefficients lend strong support to our argument as to the multi-dimensionality of housing, and specifically to the ordering and intensities of household preferences as we have postulated them. In the numerical application of the coefficients immediately above, we see confirmatory evidence of the arbitrage model itself.

One further aspect of Table 11 needs to be discussed — the rather high negative value shown for Item 5, age of housing, which would appear to confute our contention as to the irrelevance of the age factor in determing income- or value-levels. We suggest that care be taken in interpreting this evidence. Although the structure, with proper maintenance, need not necessarily deteriorate with age, other characteristics associated with age enter household considerations. On average, an area of older housing will probably have the higher development density of an earlier time and the design of its structures will probably reflect a different style of living than that of today. Design may or may not lend itself to conversion to contemporary tastes (and will be costly in any case), while high density cannot be reduced to low density (except through the operation of arbitrage itself, with its end-stage of demolition). These are some of the reasons why older units may be discounted. Moreover, as we have insisted, new areas become

available as family income increases, and we have observed how neighborhood succession has moved outward from the center of the city, encountering older neighborhoods first. Presently, then, age carries tangentially part of the change associated with lower income-level. This has been substantiated when we showed that for groups of neighborhoods with structures the same age, those that went through transition were proximate to previous change, while those that did not were isolated.

It should be pointed out that there is an obverse to this syndrome of age with declining income: in certain areas, age itself lends prestige -- just as we have ourselves referred to "the stately old homes of Clayton." And in certain aristocratic subcultures, only the nouveaux riches occupy new housing, whereas the unostentatious "old families" occupy ancient housing of impressive scale. The extreme of this syndrome -- comparable to dilapidation or abandonment -- is the very high value placed on old mansions in prestige areas such as Fifth Avenue, Belgrave Square, the Crescent at Bath, the Faubourg St. Germain, or at the very peak, French chateaux and English country estates. Thus the relationship between age, socio-economic character and value would appear to be tightly complex at both ends of the value scale. At some point below median, then, age changes from a plus factor to a minus: but it does so due to considerations other than age itself.

B. Revealed Preferences of Moving Households*

Now, using the same analytic techniques as in the cross-section analysis above, we shift our focus closer to the motivational preferences of moving

*Source for this subsection is Institute for Urban and Regional Studies, Working Paper HMS 6, "A Revealed Preference Model for Analyzing Interneighborhood Mobility," by Charles L. Leven and Jonathan Mark, Washington University, St. Louis, written under National Science Foundation Grant GI-37861, November 1974.

households. Here our sample consists of slightly over 600 observations of specific household moves into or out of two St. Louis neighborhoods at the city's western edge, University City and Walnut Park. Because all moves studied were within the St. Louis area, in each case we know the gross price (or rent) of both the evacuated and the newly-occupied housing units. Our focus of interest, therefore, is no longer on the gross price but on the <u>difference</u> between the two values. This differential, when it is a plus, represents a premium the household has paid, inferentially for a better housing situation; when it is a minus, it represents a discount for a less good situation. That differential now becomes our dependent variable: it is the value-figure we must break down into its housing-bundle components, again demonstrating their preference ordering and their magnitudes of intensity.

The basic equation of our estimating procedure is, then, essentially as before:

$$\Delta K = \alpha_H \Delta H + \alpha_N \Delta N + \alpha_A \Delta A + \alpha_B \Delta B + \alpha_T \Delta T$$

(The Greek delta symbolizes <u>differential</u>: therefore, the differential of the capital cost (ΔK) equals the total capital costs of the differentials of the housing-bundle components, where H = structural characteristics of housing, N = neighborhood characteristics, A = access, B = public services and T = taxes).

Of course, as before, each of these categories of housing attributes must be further broken down: for example, N will comprise separate values for such characteristics as median income level, percentage of rental occupancy, percentage nonwhite, etc. What we are seeking, then, are imputed values -- the "α" coefficients above -- for each housing-bundle characteristic which will explain in a valid way the capital-cost differential of the move.

Let us now briefly review our data base for this exercise. The sample comprises 370 white households and 237 black households who moved within the St. Louis SMSA to or from Walnut Park or University City within the period 1967-1972. Table 14 shows a breakdown of this total sample.* Data sources were the 1970 census at the tract level, roughly at midpoint in the time period of our survey; interviews and questionnaires with the moving householders (our total sample comprises only those who made adequate response); and local jurisdictional sources for data on access, crime rates, etc. At an advanced stage of our statistical analysis it became abundantly evident that a number of independent variables failed to survive the test of multiple regression and emerge with any measurable

*It is not germane to our present analysis, but note should be taken at this point of the remarkable categorical differences between white and black moves evident in Table 14: these differences have direct bearing on the social disbenefits of neighborhood transition which we shall be discussing later. The types of moves (by percentage) by white and black families in the sample are as follows:

	Own-Own	Rent-Rent	Rent-Own	Own-Rent
White	60	11.3	21	7
Black	21	7.6	71	—

We see that the percentages of owner-to-owner and renter-to-owner moves are almost exactly reversed between white and black groups, with no fewer than 71 percent of black families switching from rental- to owner-occupancy (and no blacks devolving from owners to renters). Inferentially, all (or most) moves are impelled by the family's desire to better its housing, but what is remarkable here is the categorical nature of the blacks' upward mobility. For almost three-quarters of the black families in this sample (which is non-random but certainly not untypical of the SMSA), the move represented not merely a housing improvement but a major step upward in household status and stability. However, in the continuing operation of the arbitrage process, it is the common frustration of this latter aspiration which is the unhappy sequel of particularly black disbenefit we must later describe.

Table 14
Sample Composition

	Total	White				Non-White			
		Owner-Owner	Renter-Renter	Renter-Owner	Owner-Renter	Owner-Owner	Renter-Renter	Renter-Owner	Owner-Renter
University City*	335	118	30	43	14	33	6	91	—
In-movers	180	10	16	22	4	33	5	90	--
Out-movers	155	108	14	21	10	--	1	1	—
Walnut Park*	272	106	12	35	12	17	12	78	--
In-movers	113	2	3	4	2	17	12	73	—
Out-movers	159	104	9	31	10	--	--	5	--
	607	224	42	78	26	50	18	169	--

*University City consists of Census tracts (2157 to 2162) and Walnut Park of tracts (1072 to 1076)

explanatory significance: these included age of housing and all measures of access, crime and crime prevention.* Therefore we will not burden this presentation with further reference to those characteristics: readers who wish an account of the eliminative process are referred to the source paper.

Let us now define our dependent variable — the differential in capital costs involved in the move. Here our problem was to develop comparable capital-cost figures as between owner occupancy and renter occupancy. To achieve this we first had to convert annual rents to a capital value. Then, since taxes and insurance costs are included in rents, we had to capitalize the future stream of these costs for owners, as before, adding this figure to the market value. Finally, since owners must pay utilities and maintenance costs, we had to adjust for these costs in the value of rental units: 10 percent of the rent was deducted for maintenance, as well as the annual value of utility services included in the rent.**

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*Our very provisional conclusion regarding the crime factor is that it is associated with neighborhood decline but may be more a consequence than a cause of that decline. The access finding we attribute, as before, to the high degree of dispersal within the SMSA and of achieved arterial grids. We suspect that both of these findings may be typical of many metro areas.

**These calculations may be stated as two equations.

For owners: $K = V + 23.5\ (T + I)$

For renters: $K = 23.5\ (0.90\ R\text{-}U_r)$

where V is the market value of the property at time of move, T and I are annual property taxes and insurance premiums, R is gross annual rent and U_r is annual value of utilities included in rent. The coefficient 23.5 is the present value multiple of a 50-year stream at 3 percent, which is an estimated real rate of return based on an assumed 8% nominal return and a 5% rate of inflation for the period 1967-72.

Thus, with consistent cost formulas for renters and owners, we are able to establish a ΔK, or cost differential, for each move of whatever type; and with the collected data on all our independent variables, we can proceed with our statistical analysis.

As before, we first factor to account for collinearity (or high covariance) among independent variables; except that this time, since our sample is not a cross-section but a non-random set of observations within two dissimilar neighborhoods, our only area of certain collinearity (or overlap-effect) is in structural characteristics. Our first step, then, was to reduce five structural variables -- garage space, air conditioning, number of bedrooms, baths and total rooms -- to two factors.

Now our interest focuses on four groups of movers: our total sample, the whites, the blacks, and all movers who ended up as owners. Our next stage, then, was to run stepwise regressions for each of these four groups, employing our two structural factors plus twenty independent variables describing neighborhood characteristics, public services and access. It was in this process (itself a double operation, in which the entire sequence of regressions was repeated after initial eliminations) that 14 independent variables were eliminated because at no stage did they produce coefficients significantly different from zero.* We

*It will be noted that among the characteristics thus eliminated was % NONWHITE IN ADJOINING TRACT, a variable which in our earlier analysis showed a higher level of intensity than % NONWHITE IN POPULATION, a result to which we attached particular significance. The reason for this disparity has to do with the differing nature of our present sample. The households observed in this analysis were moving to or from neighborhoods with approximately the same levels of percentage nonwhite in adjoining tract, whereas the previous analysis was a random sample of household relocations from the entire SMSA, with a full range of neighborhood divergence. The statistical method we are employing, however, requires variance -- since obviously we cannot establish a value for a standard unit of deviation if there is no deviation. Thus, while our present nonrandom sample of specific moves affords us a more detailed, close-up observation, it has inherent and penalizing limitations. In short, the failure of % NONWHITE IN ADJOINING TRACT to show significance in the present analysis should not be construed as casting the earlier finding into question.

concluded this stage, then, with a total of eight independent variables:

FSTR 1	=	Structural Factor 1
FSTR 2	=	Structural Factor 2
MEDY	=	Median Income
NW	=	% Nonwhite in Population
RENT	=	% Renter Occupancy
EXPPUP	=	Expenditure per pupil
POP65	=	% Population 65 and over
DV	=	Dummy Variable for single-family residence (at end of move)

Of these, only the last requires explanation: if a household moved from single-family to single-family residence(or multi- to multi-), the move was given 0; if from multiple-dwelling to single-family, a 1; if from single-family to multiple, a -1. This variable was included to adjust for the effect of a private backyard on housing desirability.

The third and fourth stages of our analysis were technical manipulations required by the methodology and have no interpretive significance. In the third stage, the eight independent variables above were reduced to three factors. In the fourth stage, regression equations were derived for each of the four samples using only these three factors as independent variables. All of the coefficients in all of the equations showed significance. That is to say, our independent variables had met the statistical test and were proved to be indicating real orders of difference.

The final stage was the mathematical translation of these equations into three sets of value-figures, only the last of which is of interest to us here.*

*The intervening sets, presented as Tables 6 and 7 of the source paper, are the correlation coefficients between the individual variables and the factors (Table 6) and the regression coefficients of the factors for each of our four samples (Table 7).

This is the table of "implicit coefficients," presented here in accompanying Table 15 for the total sample. In Table 15, the five previously noted structural variables have been omitted as of no interest to the thrust of our present investigation: suffice it to say that they show the expected high positive values. It is the first, left-hand column of Table 15 which represents the culmination of our entire statistical exercise and which therefore merits our close inspection and interpretation.

TABLE 15

Implicit Coefficients: Total Sample

Variable	Coefficient	Standard Deviation	Coefficient per Standard Deviation
MEDY	1.81 (per $1)	3852.30	6972.6
RENT%	-30.42 (per % point)	15.16	-461.2
POP65%	-433.52 (per % point)	6.51	-2822.2
NW%	-235.51 (per % point)	19.18	-4517.1
EXPPUP	4.26 (per $1)	202.72	864.3
DV	(1397.89) (plus, minus or zero)	.38	531.2

Now, to interpret this table we return to our original point of departure: we are seeking to determine in what measure neighborhood characteristics account for the difference in capital cost between the housing moved from and the housing moved to. Interpretively, then, Column 1 could be labeled Dollars of Difference Per Unit, and the units are specified parenthetically. For the first item, then, we may say that each thousand dollars more of median income in the new neighborhood accounts for $1,810 of the cost differential. If the neighborhood moved to has lower median income, the value figure remains the same but becomes a minus quantity.

In the same way, each additional percentage point of renter occupancy in the new neighborhood is a minus $30.42 in accounting for the cost differential --

or a plus $30.42 for each percentage point fewer renters in the new neighborhood. Only DV -- the dummy variable for single family residence -- is to be interpreted differently: as explained previously, it is a zero if the household has moved from single family to single family housing, a plus $1397.89 if from a multiple unit to a single-family unit, and a minus $1397.89 if from single- to multiple-family.

Now, since only Column 1 is of interest to this discussion, we will excerpt that column from what would be the equivalent of Table 15 for each sample group and present the values here, under our interpretive rubric, as Table 16.

TABLE 16: DOLLARS OF DIFFERENCE PER UNIT

Variable	Total Sample	Owner Sample	White Sample	Black Sample
MEDY	1.81	1.78	1.77	1.75 (per $1)
RENT%	-30.42	-12.68	--57.93	-26.35 (per % point)
POP65%	-433.52	-397.94	-461.06	-342.84 (per % point)
NW%	-235.51	-230.78	-229.21	-234.14 (per % point)
EXPPUP	4.26	5.24	3.33	6.11 (per $1)
DV	1397.89	1328.16	2131.58	90.26 (plus, minus or zero)

With these values before us, we are at last able to demonstrate with what magnitud (or degree of intensity) each neighborhood characteristic accounts for the cost differential, and we are also able to show how these intensities vary between our sample populations. We will consider each variable in turn.

We observe that the median-income value is at the same high level for all four samples. It should be pointed out that these figures (like all the figures in Table 16) cannot be strictly compared to the similarly labeled values in our earlier cross-section analysis. Our finding in that prior analysis was that each $1 of additional median income added about $2.50 to the gross price versus our present finding of roughly $1.80 for each added $1 of income.

The analysis of movers is based on a non-random sample of all movers and therefore we would expect differences in the estimated coefficients. However, it is striking that for two important variables -- median income and percent non-white -- both the cross-section and the analysis of movers yield similar values when the dependent variables are measured in terms of their standard deviations. From the third column of Table 11 we see that the value on a standard deviation in median income is 7478 compared to a value of 6973 for the movers (Table 15, column 3). Similarly, the non-white percentage has a value of -4564 in the cross-section and 4517 in the analysis of movers.

With percentage of renter-occupancy, it appears anomalous that owners should show the least sensitivity to this neighborhood characteristic tacitly associated with instability. It seems,however,a reasonable assumption that since the sample is heavily weighted to owner-owners, these households have moved both from and to neighborhoods largely comprised of owners. The obverse of this finding, of course, is that it is renters themselves who object most to renter-occupancy -- another apparent anomaly. But again, we must observe that most households that rent do so not from choice but from necessity, whereas all households desire maximum neighborhood stability. The high degree of renters' sensitivity to renter-occupancy may be read as reflecting both their disaffection with their own present status and their wish to associate as closely as possible, if vicariously, with the stability of ownership.

The true anomaly in these figures is the relatively low-level reaction of the black sample to renter-occupancy (less than half as intense as the white reaction), which is inconsistent with the strong upward mobility evidenced by the blacks in all other measures. In particular, it is inconsistent with the fact,

already noted, that 71 percent of the black sample had with this move changed status from renter to owner. The only explanation that suggests itself is long inurement, or acceptance, by the black population of renter-occupancy as a way of life, with the consequence that it is not seen as a negative attribute to the same degree as with the white population.

The high negative values shown by all samples for percent of population over 65 is also associated with the idiosyncrasy of our total sample -- the fact that almost 86 percent of all observations terminated in owner-occupancy. The apparent aversion to old people may simply reflect a preference for younger families with children. The aged are seen as "non-family," anti-school bond and a tax burden. Most importantly, they are also seen as low-income, and undoubtedly the values shown for this variable exhibit a large degree of negative covariance with median income.

The negative response to percent nonwhite in the neighborhood is also of high intensity and clearly almost uniform for the four samples. Most interesting, of course, is the fact that, for the breakdown populations, it is just as high among blacks themselves as among whites. There could scarcely be clearer evidence of our major postulate regarding the impact of race -- namely, that nonwhite is primarily associated in householder perception with low-income. This is manifested here in two ways. First, it is shown in the fact that percent of aged registers a greater negative intensity for our sample than percent nonwhite: this follows from the evidently large number of middle-income, home-owning blacks in the two neighborhoods of our sample. Second, it is shown in the negative reaction of the black sample itself for percent nonwhite in the population: only the identification of "nonwhite" with the likelihood of low-income could explain this value.

The much higher positive value associated with expenditure per pupil in the black sample (almost double the white) is again an indication of the high degree of self-consciousness in the blacks' upward mobility, though the coefficient for PER PUPIL EXPENDITURE is surprisingly low in all cases. This variable has not been previously explained: the black coefficient means that for every additional $100 expended per pupil in the neighborhood (school district) the blacks in the sample would pay an additional $611 to move. Thus, beyond revealing the ordering and intensities of household preferences, the present analysis has, through several indices, demonstrated the different kind of importance attached to the move by the black sample: as noted before, for them the move represented more than an improvement in housing. It was in many ways a giant step upward — that "escape from the ghetto" we have had many occasions to note in our studies of the mechanism of urban blight.

In summary, then, our present analysis has again revealed median income-level as the prime determinant of the housing bundle in household preferences: it has emerged from the analysis with a very high value on its own account, while the inter-relative values of such other neighborhood characteristics as percentage of aged and percentage of nonwhite are clearly seen to reinforce and intensify the primacy of income-level.

C. Householder Preferences Explicitly Stated*

At the same time as the data collection for the statistical analysis presented in the subsection immediately above, personal interviews and questionnaires were

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*Source paper is Gary A. Tobin, "An Analysis of Attitudinal Responses of Movers in Transition Neighborhoods," Institute for Urban and Regional Studies, Working Paper HMS 7.

conducted using the same sample base of in- and out-movers from University City and Walnut Park. It must be pointed out that this was at an early period in our technical studies subsequent to our 1972 publication and we were not yet aware of the importance neighborhood median income was to assume in our analysis. Had we been so aware, our questions would have been deliberately formulated to elicit perceptions of income-level.

Even so, this would have posed considerable difficulties. We have been speaking of our findings as demonstrating "household preferences," and indeed we have defended them as entirely valid: but we must recognize that the most important of these "preferences" -- for higher median income-level -- is in fact an unconscious one, a statistically produced artifact revealing in objective market terms what is, in the reality of subjective householder perceptions, a complex of many notions, prejudices, "theories" and concepts held by people exhibiting a full range of intellectual and socio-economic characteristics. On the face of it, householders have at best only a very general idea of the income-level of the neighborhood they inhabit (less of the one they contemplate moving into), and no notion whatever of the median income-level.

Thus it was merely fortuitous that one item of our questionnaire (only those responding adequately were included in the sample) was appropriate to elicit -- to the extent it exists -- the householders' perception of the socio-economic complex manifested statistically as "income-level:" in Table 17 this is the eighth column,headed Neighborhood Conditions. Now it is to be noted that this rubric is exclusive of such specific "neighborhood conditions" as "neighbors" (implying those on the same block, in close association), "crime," "access," "schools," "public services" and "facilities" -- all of which appear in the same

TABLE 17

U. City Out-Movers Rank Reasons for Moving
(All figures are percentages*)

Rank		Housing	Neighbors	Job	Transportation	School	Crime	Service	Neigh.Cond.	Facilities
Most Important	1	60.5	6.2	1.2	0.6	13.0	6.2	1.2	16.0	0.6
	2	12.3	6.8	6.8	5.6	19.1	6.8	2.5	17.3	2.5
	3	3.7	3.7	6.8	4.9	6.2	8.0	1.9	12.3	4.9
	4	3.7	3.1	4.9	1.9	3.1	3.1	1.9	5.6	4.9
Least Import.	5	0.6	5.4	4.4	2.5	0.6	4.3	1.8	1.8	2.5

U. City In-Movers Rank Reasons for Moving

Most Important	1	60.1	1.5	6.1	2.5	13.6	7.1	1.0	16.7	2.0
	2	14.1	4.0	4.5	4.5	20.2	10.6	2.0	23.7	5.6
	3	7.6	8.1	3.5	2.0	11.1	8.1	1.0	19.7	9.1
	4	2.5	3.0	0.5	2.0	1.5	6.6	3.0	5.6	9.1
Least Import.	5	1.0	2.5	1.5	1.5	1.0	3.5	2.5	1.5	2.5

Walnut Park Out-Movers Rank Reasons for Moving

Most Important	1	42.9	8.3	8.9	1.2	10.7	21.4	1.8	42.9	1.8
	2	5.4	6.5	6.5	4.2	10.7	14.3	4.8	16.7	4.8
	3	2.4	4.2	1.8	1.8	6.0	6.0	1.2	7.7	1.2
	4	3.0	2.4	3.6	1.8	2.4	2.4	1.2	3.0	0.6
Least Import.	5	0.6	1.2	1.2	2.4	2.4	---	1.2	0.0	3.6

Walnut Park In-Movers Rank Reasons for Moving

Most Important	1	65.8	9.2	5.0	5.8	10.8	12.5	5.0	26.7	1.7
	2	10.8	4.2	4.2	5.0	10.0	15.8	4.2	27.5	5.8
	3	5.0	8.3	5.8	5.0	3.3	10.0	2.5	8.3	5.0
	4	0.8	2.5	5.8	1.7	1.7	0.8	0.8	5.0	3.3
Least Import.	5	1.7	2.5	1.6	3.3	1.6	5.0	3.3	2.5	3.4

*Had respondents followed instructions to the letter, the column totals in this table -- read laterally, from left to right -- would be 100. It will be noted that the entries for "Most Important" (1) in each case exceed 100, while progressively, moving down to "Least Important" (5), they drop farther below 100. This is because respondents often listed more than one variable as 'most important' and then progressively lost interest in noting the 'less important'.

question as separate items of choice. "Neighborhood conditions" must, then, be construed in this context as closely approximating an area-wide assessment of the socio-economic level.

In Table 17, "housing" refers to structural characteristics of the dwelling unit, and here again -- as in all our measures of housing-behavior determinants -- we expect this consideration to be most important, since most moves are precipitated by life-cycle changes (that is, shifts in family size or income). This, we observe, is indeed the case: for three of the four groups of our sample, "housing" was chosen by the highest percentage of movers as the most important reason for the move. In the fourth, however -- Walnut Park Out-movers -- "housing" and "neighborhood conditions" were given first ranking by the same high percentage of respondents -- 42.9 percent.* And in each of the remaining three subgroups, "neighborhood conditions" was given first ranking by the next largest component of respondents after "housing."

Moving down to second ranking (the lateral rows "2" of Table 17), we note that in all subgroups of the sample except University City Out-Movers, "neighborhood conditions" is chosen by a higher percentage of respondents than any other variable, <u>including</u> "<u>housing</u>." (Among U. City Out-Movers, "school" is given second ranking by slightly below 2 percent more respondents). This reading is exactly what we would have predicted from our hypothesis.

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*As footnoted in Table 17, many respondents marked more than one of the variables as "most important," and most of the respondents progressively neglected to mark <u>any</u> of the variables as they moved down the ranking toward "least important." These less-than-ideal responses do not, however, affect the validity of the weighting to be noted for the individual variables: the figures in Table 17 still reflect both the ordering and intensity of preferences, albeit more grossly than was desirable.

Thus -- reading "neighborhood conditions" as the closest subjective approximation to socio-economic status -- we again see confirmed our basic postulate regarding the preference ordering of the housing bundle: that is, once the household's structural requirements are met, the prime determinant in household moves is the "condition" of the neighborhood, a euphemism for the kind of people there.

In the primary source-paper, the subgroups of the sample are further broken down in various ways for the several variables -- by age, by educational level, by religion, by income, by race, by family status (with or without children), etc. -- to provide a more detailed analysis of these 600 moving households. Not unpredictably, the findings show clearly that the lower the socio-economic level of the respondents the less importance given to quality of schools, while families without children accord schools the least consideration (highest importance is given schools by Jewish respondents). Again predictably, the lower the socio-economic level of respondents the greater importance is given to crime, to "neighbors" and to job considerations.

Since the questionnaire did not include a query overtly related to the impact of racial change, perceptions of this element of the problem emerge explicitly only in the voluntary personal statements of the interviews. These expressions are, of course, maximally subjective and must be carefully interpreted. They have something of the same order of validity as word-association testing: that is, they can seldom be taken as representing considered judgements but are rather off-the-cuff pronouncements reflecting a gross perceptual nexus of cause and effect. As such, they have primary validity as reflecting subjective <u>intensities</u>. In these terms, a high degree of correlation is again observable between socio-

economic level and intensity of loading upon the racial factor: the lower the educational/income level among white respondents, the more centrally black increase in the neighborhood population (or in the school population) is regarded as causative -- of falling values, of neighborhood deterioration, of increased crime, of declining school quality. A significant exception is the observation that a number of University City out-movers of high socio-economic status had moved because the introduction of low-achievement black students into the local schools was stultifying their childrens' educational progress. Nonetheless, within this general schema, a certain degree of perceptual sophistication is remarkable, as well as some highly insightful comments. We will now consider the most noteworthy of these.

Even in Walnut Park (where the statistical levels both of income and educational attainment are far below those of U. City) there was often explicit awareness of important distinctions between middle-class blacks and residents of lower status, both white and black. Comments from Walnut Park out-movers: "We moved to get away from the colored. I'm not prejudiced. The good ones came in first and then the undesirables." "Now I have nothing against coloreds, but they weren't the good ones." One who again has black neighbors after moving: "We moved because of the class of people who moved in. They were kind of trashy. Colored were moving in. They are here, but these are nice and keep up their homes, but there they didn't." University City out-movers made the same kinds of distinctions about whites: "The neighbors were not colored, but the neighbors were changing." "The old house had terrible neighbors. They were white, low-class, bothersome, and had bad personalities."

Black respondents made similar distinctions. In-movers to U. City: "The old neighborhood had begun to deteriorate." "A different class of people moved into the old neighborhood." "The city was getting worse and worse. We moved for peace and quiet."

There was also some degree of insight into housing-market manipulations as a causative factor in respondents' disaffection. A Walnut Park out-mover states:"The speculators brought the blacks in." Another linked the changes directly to "block-busting tactics." The government shared the villain role with the real estate sector. One out-mover from Walnut Park blamed the racial change on "government mismanagement of the Turnkey Project." Another claimed that "they built a housing project on the park across the street and made an overpopulated area out of it." Another stated simply: "It's all the fault of that 235 law -- they all came from Pruitt-Igoe."

A consensus of respondents who favored integration defined their ideal as a minority of blacks, or at least a 50-50 split, whereas a large majority of blacks was unacceptable. Among out-mover statements are: "An integrated neighborhood is fine, but when 13 out of 17 homes on your block are black and no white children for your children to play with, it's time to move." "We wanted to live in an integrated neighborhood -- not totally black. We were the last white family." "We moved because we would have been the only white tenants in a four-family building and they were probably happier to have their own color living there."

There were few allusions to income-level per se, and these were usually in a particularized context. U. City out-mover comments: "Crime went up when lower income people moved in." "I couldn't live in a poor area where property isn't well kept." Perceptions of generalized neighborhood transition were common among

all respondents, most acute among Walnut Park out-movers who had, in fact, experienced change most sharply. These perceptions were both of long-term and rapid transition: "We were born in the northwest end of St. Louis 65 years ago, now it is all crap." "The neighborhood was delightful when we moved in, horrible when we moved out. I never did see a neighborhood change over like that."

A few U. City respondents showed a measure of real insight into the dynamic of the transition process: "The trouble with people is that they run -- and you know what they're running from -- but what for?" "People panicked and ran when the black element moved in." "Because of its leadership and integration, University City is good. It's just too bad the rest of the county didn't follow their example."

There are two further statistical aspects of this study that merit our attention, since we shall later have occasion to recall them. The most telling of these is what the questionnaire disclosed about families already comtemplating another move. Here we are seeing the successive devaluation of housing units which is an essential part of the arbitrage process, and also we are observing the statistics of unrealized expectation and financial loss which is the implicit disbenefit of that process. The figures for the mover-sample are as follows:

Considering Another Move Now

	% Yes
U. City Out-Movers	15.4
Walnut Park Out-Movers	25.6
U. City In-Movers	27.3
Walnut Park In-Movers	42.5

Thus almost half of the Walnut Park in-movers are already sufficiently dissatisfied with their new housing bundle to contemplate the cost of moving again. Also

through responses to the questionnaire, we are able to break this 42.5 percent group down for further analysis: we learn that of those Walnut Park in-movers whose income had increased in the past five years 40.3 percent were considering another move; of those whose income had remained the same, exactly 50 percent were so considering, while only 15.4 percent of those whose income had dropped were in the group. By age, 60.5 percent of Walnut Park in-movers between 31 and 40 fell into this group, 40.6 percent of those between 41 and 50, and 21.1 percent of those between 51 and 60. Thus, not unexpectedly, it is those in the age and income groups with the highest mobility -- those who can take the loss -- who are again seeking to escape.

The second set of statistics of particular interest to us concerns census-tract data regarding those Walnut Park in-movers, 42.5 percent of whom are contemplating another move. We learn that Tract 1073 was the destination of the largest number of them -- 44 families, 39 percent of all Walnut Park in-movers in the sample. Tract 1073 is discovered to have the highest median income of Walnut Park tracts ($8,407), the highest percentage of owner-occupancy (82%), the highest percentage of single-family residence (86.4%), and the second highest median of educational attainment (9.0 years of completed schooling -- highest is 10.7 years).

For all its relatively low-level socio-economic status, then, with its concomitant low-level perception of self-motivation (albeit lit by occasional flashes of shrewd insight), this group of Walnut Park in-movers exhibits in the flesh the major hypotheses of our model of neighborhood transition -- the ordering and inten-

sity of household preferences as we have postulated them, the thrust into erst-while higher-income turf which is the moving boundary of arbitrage, and the subsequent disillusion and costly flight as the new neighborhood deteriorates around them,which is the continuing dynamic of the transition process.

Chapter 3

BEHAVIORAL PATTERNS OF TRANSITION

In the foregoing chapter we have been isolating, identifying and testing the elements of householder preference which provide the motivational base of neighborhood transition. Statistically, this analysis took the form of revealing the ordering and intensities of these preferences as they are expressed in market transactions -- first through a breakdown of gross price of actual housing purchases in one year for a cross-section sampling that embraced all of St. Louis City and County, second through analysis of the cost differential between formerly and newly occupied units for a sample of moving households into and out of two St. Louis neighborhoods. Subjectively, in direct interviews with the same sample of moving households, the analysis then took the form of explicitly stated "reasons for moving," which were only partially susceptible to statistical presentation.

Many of these latter took, inevitably, highly individualistic, unclassifiable expression, and they ranged from nakedly stated race prejudice to a fairly sophisticated level of insight into the transition-process itself. All of these, however naive they may be in concept or expression, we must consider equally valid and impelling as motivational elements in the process, for they are indeed the basis of human behavior. We reconcile the two classes of identified preferences -- the statistically objective and the idiosyncratically subjective -- by recognizing that the total collective impact of individual householders' prejudices, judgements, hopes and fears, eventually registers in the market as the preference ordering we have statistically identified.

Earlier, in the first chapter of this Part Two, we presented the paradigm of neighborhood transition. There, as we have noted, we were studying how transition takes place, whereas in our analysis of preference immediately above we were studying the why of transition.

In the present chapter we are now going to combine this how and this why in order to view neighborhood transition from within, as patterns of householder behavior. Here, then we are studying arbitrage not as a theoretic model but in action; that is, we will be observing, from inside, the dynamic of arbitrage. We are enabled to do so by the depth and completeness of our cumulative data collection, particularly in reference to two inner-ring suburbs, Wellston and University City.

The present chapter is in five brief sections. First, in University City, we observe the operation of arbitrage aborted far short of its terminal stage by the imposition of jurisdictional constraints. Second, in an analysis of 32 St. Louis area neighborhoods, we examine on a wide scale the particular role of the racial factor in transition. Third, in Wellston, we observe unimpeded arbitrage running its full course. Fourth, we present graphically the moving boundary of arbitrage. Finally, we make a summary appraisal of the import of our neighborhood-transition model.

A. University City: End-State Aborted*

Our study period is now 1961-1971, and our data base is such that for the first time in this study we are able to relate continuous information on income** (socio-economic status) with continuous real estate information on prices and

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*Source paper for this section is "Housing Market Behavior, Household Mobility Patterns in a Transition Neighborhood," by James T. Little, Washington University, St. Louis. Working Paper HMS-1.

**Our yearly income-level datum is the decile rank derived from the Polk Directory, as previously explained. As will shortly be seen, the small size of our sample in this study (about 50 units per tract) inevitably produced some distorted readings. To the extent possible, these will be accounted for.

turnover rates. These data are presented here in the following Table 18 for each of the six census tracts of University City, where T (turnover) represents the percentage of housing within the tract to change hands within the year (based on a one-third sample of all units) and R (rank) represents the income decile rank from 1 (lowest) to 10 (highest). P (price) requires some explanation. It shows the price index for single-family house sales, derived from FHA appraisals for actual sales. As before, the price of each individual unit was adjusted to account for structural differences so that it could be priced as a "standard unit." Then, simply as an arbitrarily selected base for comparison-readings, the 1961 average of prices in Tract 2157 is used as 100: all other P (price) readings in Table 18 are tract-averages seen <u>as percentages</u> of that base figure.*

For convenience, our earlier Figure 10 is again presented here as Figure 13. We must recall that the three southern tracts (2161, 2162 and 2158) represent high-income neighborhoods and are buffered from advancing transition on the north by arterial streets and on the south by Washington University and Clayton. Of these, however, the easternmost — 2161 — directly abuts the West End section of St. Louis City, subject to rapid transition in the mid- and late-1950s.

*It will be noted that all tracts show <u>absolute</u> price declines within the study period, although two — 2160 and 2161 — show an increase overall. This is in evident disagreement with our earlier statement that only Soulard-Lafayette, of the 15 areas (including University City) analyzed in Chapter 1 of our Part Two, experienced absolute value loss. The earlier price index used the census estimates of housing value, which are the householders' personal appraisal, whereas the present figures are derived from actual sales. The census figures are thought to have greater reliability at the aggregated, SMSA level than in microanalysis. At any rate -- whatever the cause of the discrepancy — the figures in each case came out as they did and remain valid in their own terms.

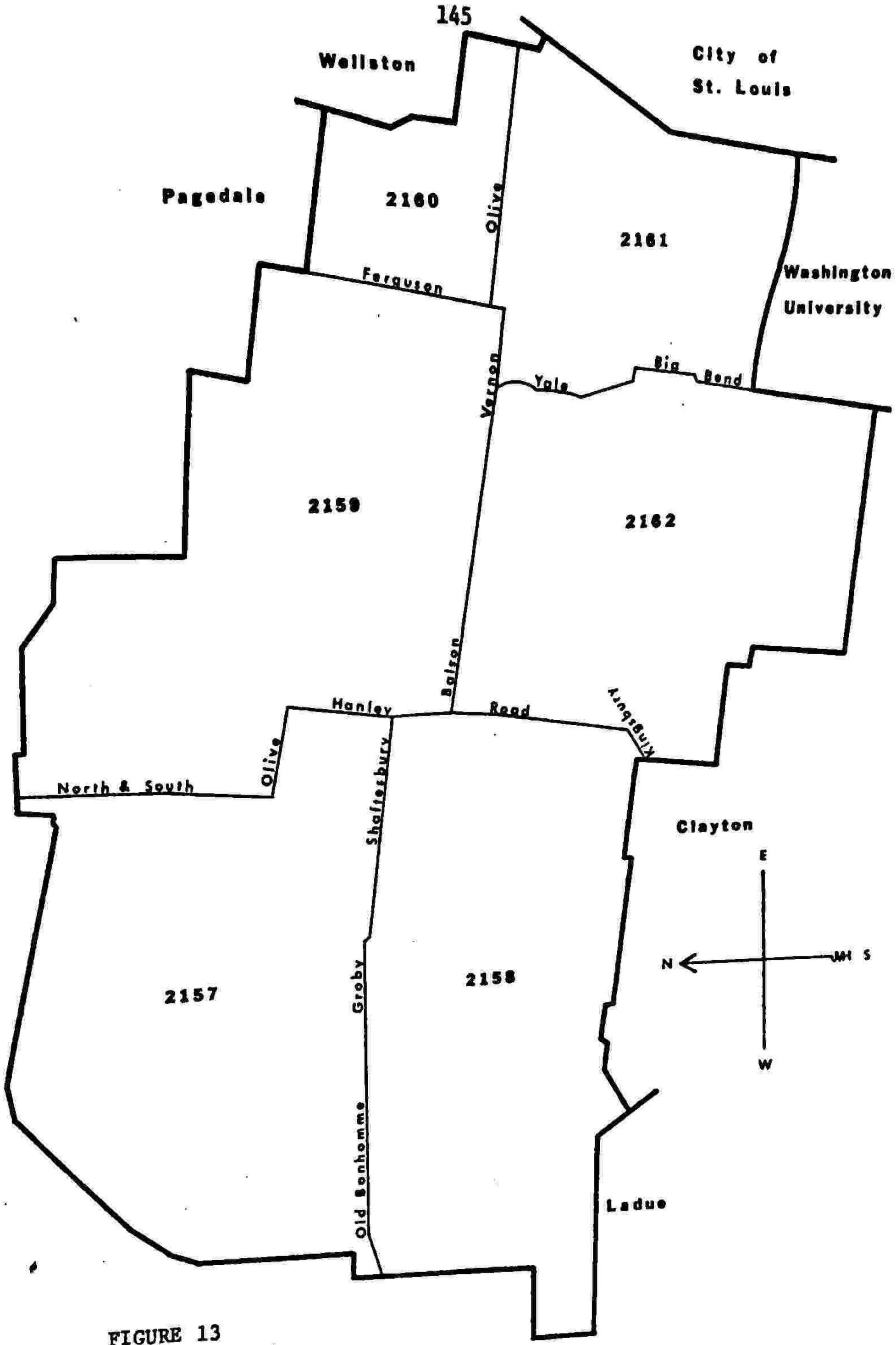


FIGURE 13
Census Tracts In

University City

Finally, it is an essential element of the sequence we are studying here that in 1967 -- almost at the midpoint in our study period and at the very moment when transition was getting under way -- University City enacted strict occupancy ordinances: a maximum number of residents was established for each housing unit, and each vacated unit was required to pass a code inspection before it could be either rented or sold. These ordinances brought to an end the conversions and doublings which had already begun to occur (particularly in apartment areas of Tract 2160) and in effect, by fiat, University City established itself as a middle-income community from which the poor would be excluded by the stringencies of code enforcement.

Thus arbitrage -- the successive devaluation of housing by a recurring wave of turnover to occupants of lower income status -- was checked. <u>But the process had already begun</u>, and what is interesting here is to observe the extent and nature of the transition that took place nonetheless. Some of what we observe comes as a considerable surprise.

We turn now to Table 18 for this sequence. In 1960 none of the tracts had over 1 percent nonwhite population, but by that year the arbitrage boundary -- particularly with respect to racial change -- had reached the eastern limits of University City and was soon to reach the northern as well. The percent of nonwhite population for each tract by the end of the ensuing decade is shown at the bottom of the table, and we see that the rapid and considerable transition in racial composition was concentrated in the three northern tracts -- 2157, 2159 and 2160, where the nonwhite percentage reached 26.3, 39.0 and 46.1

TABLE 18

Owner-Occupied Turnover (T), Price Indices (P), and Median Income Rank (R) by Census Tract

	2157			2158			2159			2160			2161			2162	
	T	P	R	T	P	R	T	P	R	T	P	R	T	P	R	T	P	R
1961	4.8	100	8	4.6	146	8	5.9	107	7	4.6	70	8	7.1	73	10	4.6	116	8
1962	6.0	98	8	6.3	110	8	4.5	91	7	4.6	73	7	2.8	92	10	6.7	116	8
1963	5.7	76	7	3.1	110	-	6.6	81	7	9.3	84	7	12.8	91	10	8.3	105	8
1964	6.1	88	-	10.5	107	9	6.2	76	-	6.2	76	-	8.1	85	—	5.5	101	-
1965	8.9	91	8	8.8	139	9	11.6	96	6	16.9	86	7	9.0	81	10	9.5	114	8
1966	7.8	91	8	9.7	124	8	11.3	94	6	12.9	52	7	9.0	96	10	9.5	105	8
1967	13.5	99	8	10.6	136	8	13.1	95	6	13.9	81	8	9.0	87	9	8.5	112	8
1968	11.0	96	7	6.6	136	8	13.8	93	6	16.5	85	7	10.0	100	9	5.7	131	8
1969	11.5	97	7	9.4	134	8	11.6	92	6	13.9	70	6	11.9	83	7	7.9	112	8
1970	12.3	96	7	7.8	113	8	9.3	86	6	7.7	71	4	11.9	81	9	8.9	110	8
1971	12.0	89	7	7.0	119	8	10.3	84	6	10.3	81	4	11.9	80	10	2.2	112	7
Change in % N.W..60-70		26.3			8.3			39.0			46.1			14.7			4.8	
% Change in Price 61-62 to 70-71		-6.6			-5.7			-14.0			7.7			-1.2			-4.3	

respectively. Tract 2161, directly abutting the West End but with half its housing in large, high-quality single-family residences, had the next highest gain in nonwhite population, 14.7 percent.

The timing of this influx of new households is fairly apparent from the turnover rates shown in Table 18. As predicted by our model, Tract 2161, directly adjoining the West End transition, had the first startling leap in turnovers -- from 2.8 percent in 1962 to 12.8 percent in 1963. Tract 2160, abutting the slightly later transition in Wellston, doubled its 1962 turnover rate in 1963, but experienced a truly massive increase only in 1965, the same year turnovers leapt upward in adjoining Tract 2159. Tract 2157 -- of the northern tracts the most remote from the West End -- did not experience the leap in turnovers until two years later, 1967, when transition was well under way in Tract 2159. This sequence is exactly the advancing wave predicted by the arbitrage model. It will be noted that lower decile ranking either occurred simultaneously with increased turnover in these tracts or followed within a few years.

It is when we look at the price index, however, that we are given a surprise. Since these prices are internally relative for standardized units, what they show when read laterally are, in effect, the discounts or premiums householders paid to live in one neighborhood or another. What we unexpectedly found was that relative prices throughout University City had declined with the first changes in income and race in the western part of St. Louis City. We had thought that these discounts might occur in anticipation in several blocks ahead of change, but not throughout the entire suburb. Here, then, are the statistics of city-wide (University City) expectation, and the explanation would seem to be that the price of the total housing bundle reflects anticipated change in such public service characteristics as education, which are associated with all housing units in the suburb.

Table 18 clearly shows that in 1961 the two "boundary" tracts bordering St. Louis City -- 2160 and 2161 — were discounted the most, and this despite the fact that 2161 had the highest decile ranking! Evident here is the folk wisdom expressed in the interview statements noted earlier, the self-fulfilling fear of passive downranking. In the ensuing eleven years of fluctuating values, these relative values are seen to hold: in 1971 the most heavily discounted tracts were still 2160 and 2161.

We must reiterate here the point that the decile rank is a measure of economic status rather than of income per se. It measures the occupational ranking of the head of household and therefore does not reflect earnings of other household members or of property income. Furthermore, by design, students are excluded from measurement. As a consequence, the index will tend to overstate the status of areas with a high proportion of student residents. The decile rank for Tract 2161 appears to be overstated for this reason. The median income readings for the University City tracts from the 1960 and 1970 censuses are:

	2157	2158	2159	2160	2161	2162
1970	10,652	14,032	11,082	9,391	9,929	14,524
1960	7,684	10,537	7,606	6,342	6,417	9,833

The price fluctuations shown in Table 18 are also of considerable interest. A vertical reading of the price indices in relation to turnovers discloses that prices tend to rise just as turnovers climb above 10 percent, after which they continue their decline. We shall return to this fact in the next chapter, when we look at FHA insurance practises in transition areas.

Thus there emerges a sequence of the neighborhood transition that results from close proximity to an area undergoing the successive stages of the arbitrage

process. Here we will equate this sequence with the explicit statements of Pref
ence quoted from householders in the preceding section:

1. Values drop, in advance of local change either in racial composition or in socio-economic level. ("People panic." "People run — and you know what they're running from, but why?") These initial declines in value express the expectation of middle-class white householders who fear a <u>future</u> value drop; it is the exodus of many of them that produces the decline.

2. Racial change occurs, and with increased turnovers values rise. (Black in-movers to University City from the West End: "The city was getting worse and worse. We moved for peace and quiet." "A different class of people moved into the old neighborhood." "The neighborhood had begun to deteriorate.") As we shall shortly demonstrate, the black in-movers to University City were for the most part middle-class, and their exodus represented second-stage transition in the West End. The simple <u>availability</u> of vacated housing in University City (surplus supply) made possible their moves, while the demand they represented affected the rise in values.

3. Once the immediate black middle-income demand is met, values again decline and this inspires a new cycle; turnovers increase and values rise again, <u>but not to the same level</u>. After four to five years of this fluctuation, the median decile rank of the neighborhood will be found to have dropped, while over the long haul the <u>general</u> trend of values is downward.

. . . . . .

Coincidentally with the study presented immediately above, two related analyses were conducted which provide insights into this process. They will not be presented here in statistical detail, but with the reader's indulgence their most relevant findings will be cited.

The first of these dealt with the rental housing market in University City, consideration of which is excluded from the above, during the same period. Since moving costs and difficulties are much less for renters, and the major constraint on them is the lease (normally of one-year duration), the reaction-time for renters is much more brief than for owners. Thus the rental market is considerably more transient and would be expected to lead the owner-occupied market in transition. This was indeed found to be the case in University City. The two tracts where rental-activity changes are concentrated are 2159 and 2160: the years 1960-63 were a period of substantially increased rental activity in Tract 2159, while in Tract 2160 there was a sharp increase in 1961 -- two to three years before transition occurred in the owner market. On a much smaller scale, there was increased rental activity in all University City tracts -- even those in which racial change remained minimal throughout (Tracts 2158 and 2162).

Here the pattern of price fluctuations was reversed, just as our studies found to be the case for the rental market in the West End. Values drop <u>during</u> the period of increased turnover (which is marked, of course, by a high rate of vacancy), recover afterward (as landlords attempt to push prices back upward), then fall again subsequently. Recalling the extreme sensitivity to renters revealed by the cost-differential study of preferences, the impelling effect of this early activity on owners is clear: for owner-households, this observed activity is a strong scent of "changes in the wind."

Because of the occupancy and inspection ordinances, a "rental floor" — the no-profit level at which landlords remove rental units from the market -- has not been approached in University City. As our earlier studies revealed, a rental floor was reached in the West End as part of second-stage arbitrage, where middle-income blacks are succeeded by low-income blacks, whereas in University City arbitrage was aborted at the first stage. The effect of this on the University City market is to stabilize expectation, and to date values have held at relatively high levels and even strengthened somewhat. Whether this situation can be maintained indefinitely will depend, of course, on continued adequate demand.

Our second related study was of migration patterns and involved a 40 percent sample of University City in-movers and out-movers (restricted to those coming from or going to St. Louis City or County) between 1967 and 1971. In that period there were a total of 6,000 outgoing households, replaced by a total of 5,200 incoming households — the difference reflecting declining population and removal of housing units from the market.

The study revealed that 62 percent of incoming households in the northern tier of tracts (2160, 2159 and 2157) — with the lowest income levels and greatest degree of transition -- were from St. Louis City. Of the remaining 38 percent, 22 percent had moved within University City and only 16 percent had come from the County. Of those moving into the three high-income, southern tracts on the other hand, 46 percent had moved within University City, 28 to 33 percent had come from St. Louis City, and 21 to 26 percent from the County. Clearly, the latter figures indicate a high proportion of moves within University City <u>away from the arbitrage boundary areas</u>.

But, analyzed more closely, the in-migrant figures for the northern tracts are yet more interesting. We find that the largest proportion originated in City Health Districts 5 and 6, which abut University City in the West End. At the same period, the West End changed from a middle-income, racially-mixed neighborhood to a low-income, all-black neighborhood -- the second stage of transition. University City, adjoining and relatively stabilized, was the evident destination for a great many of the middle-class black households making what was at least their second move, escaping deteriorating conditions in the West End.

There is also internal evidence that this was the case. We have already noted that declines in both median and mean income of University City neighborhoods occurred not prior to transition but during (and in most cases well after) the process of racial exchange. And though exchange was at the highest level in the lower-status areas (the northern three tracts), these were in no sense "poverty" or even low-income neighborhoods: both before, during and after transition they were in the upper third of national income distribution.

In the face of this evidence, it seems a reasonable conjecture that it is upper middle-class blacks who are the leading edge of racial change. This was so in University City, but they were followed by in-moving blacks of only slightly lower status due to the constraints of the housing ordinances.

The University City experience has suggested another aspect of the exchange process -- namely, that exchange is dependent not solely on the mean or median neighborhood income-level but also on the properties of income distribution. Since, statistically, we read incomes transformed into a symmetric, overall distribution, we tend to assume that neighborhood income distribution is similarly symmetric. At

close study, however, we find that this is not the case: in all University City tracts the distribution tends to be skewed on the low side. In fact, it appears that the distributions are bimodal, with incomes clustered in two ranks, well below and well above the median. The implications of this observation are that such bimodal neighborhoods are more susceptible to transition than homogeneous neighborhoods. In other words, a mix of upper- and middle-income households may be acceptable to high-income households, whereas a mix including lower middle-income households is not.

Thus University City in ten years changed from a high-income, all-white suburb to a middle-income, racially mixed suburb. Let us make a final observation as to the impact of this transition on housing values: we see that the "cliff" between high- and lower-income tracts is greatly reduced. Looking again at Table 18 we see that in 1961, in our relative index of values, a difference of 76 percentage points exists between the lowest (Tract 2160) and the highest (Tract 2158); by 1971 there is a difference of only 38 percentage points -- exactly half -- between these same tracts. Arbitrage, at least when checked at its first stage, has a levelling effect.

B. Racial Change as Harbinger

In the two preceding and rather closely related studies, we have observed a discrepancy with our earlier finding that neighborhood income-level is the primary householder consideration impelling change. In our direct-interview sampling of moving householders in University City and particularly in Walnut Park, we observed that people showed little awareness of "income-level" as such and that in volunteering "reasons for moving," a spectrum of expressions regarding racial

change was uppermost. In the immediately preceding analysis of University City's rapid transition,we observed that of the four key indices -- prices, turnovers, percent nonwhite and median income -- income was the last to show change, whereas values dropped first and in evident response to racial exchange already achieved in adjoining tracts.

The major distinction between the studies that produced these very different findings is one of time-scale. The primacy of income-level emerged from our cross-section analysis of fifteen neighborhoods throughout the area over the 40-year period 1930-1970. Our University City study, however, was of very rapid transition between 1960 and 1971, with transition really getting started only in 1965.

We have throughout this report recognized the very large problem of separating, statistically or otherwise, the impact of race from that of income-level -- a problem hugely compounded by the reiterated fact that in St. Louis, "nonwhite" is closely related to "low-income." That the two factors have a tightly interwoven relationship is obvious; but from very clear signs along the way we have insisted that the two neighborhood characteristics nonetheless have separate and distinct weighting in the preference bundle, with separate impact on housing values. We observed neighborhoods remaining all-white that had experienced severe declines in value along with declining income, and those where both values and income had remained stable despite considerable racial transition.

With our University City study we began to suspect that the difference in nature between the operative scope and effect of the two characteristics was indeed one of timing. But there was another distinction between the two studies which had produced these differing findings: the long-period study was a cross-

section analysis involving areas throughout the area; the University City study, on the other hand, was geographically tightly confined (and involved a small sample, a fact which led us into some minor statistical difficulties). In order to test the notion that the time-scale was responsible for the different finding, we decided to conduct a cross-sectional study of rapid transition. For our data base we chose 32 relatively contiguous census tracts (both city and suburban) in the one large section of the area where rapid transition had occurred -- the northwest quadrant.

We developed a data set very similar to that presented in Table 18 for the six University City tracts: median housing values for each tract were again converted to the value for a structurally "standard unit," and again the 1961 value of this standard unit in one tract (1075) was arbitrarily selected as a base, strictly for comparative purposes. This time, however, instead of expressing the comparative values as percentages, we gave them numerical ranking -- 1 (highest) through 32 (lowest). Our time period was the eleven years 1961-1971. In order to eliminate aberrance, the values in each tract for the years 1961-63 and 1969-71 were averaged (which explains the beginning and ending years of 1962 and 1970 in Table 19).

These rankings are presented in Table 19, and we must make it quite clear what they represent. Since the value-impact of structural differences has been eliminated, the shifts in ranking reveal the specific effect on values of changing neighborhood conditions, both local and in adjoining tracts. For those householders who remained in these tracts, the shifts reveal passive reranking. We recall from the University City study that it was the fear of passive downranking that inspired the pre-transition declines in value in that suburb.

Probably the most notable aspect of the rankings in Table 19 is that, despite the widely varied experience of the areas in terms of economic and racial change, for most there is relative stability in rank: 5 retain the same ranking, 17 others shift within four rank-points or less. Much of the reranking (filtering) that occurred is a result of the significant fall in rank of Tracts 2159, 2167 and 1076 and the increase in rank of Tracts 2123, 2168, 2198 and 1082.

Nevertheless, of the 992 possible pairs of tracts, about one-fourth showed significant relative reranking. When these were examined more closely -- adding to the data their changes in income and percent nonwhite -- the majority of such pairs were seen to bear out our postulates: that is, tracts with large gains in percent nonwhite and/or significant declines in income ranking were downranked relative to tracts that did not experience such changes. However, there remained again a number of ambiguous readings -- pairings where the expected result did not obtain, or where a result contradictory to the hypothesis emerged.

We therefore undertook an econometric analysis; for the 992 possible pairs we ran a multiple regression where the dependent variable was the price differential between tracts in each pair (1961-63 to 1969-71) and the eight independent variables were:

1. Percent nonwhite 1960 in 1st tract
2. Percent nonwhite 1960 in the 2nd tract
3. Change in percent nonwhite 1960-70 in 1st tract
4. Change in percent nonwhite 1960-70 in 2nd tract
5. Median age of housing in 1st tract
6. Change in median decile rank 1961-71 in 1st tract
7. Median age of housing in 2nd tract
8. Change in median decile rank 1961-71 in 2nd tract

The whole set of variables was found to explain 32 percent of the variation in changes of price differentials between tracts. However, and significantly, 29

Table 19

NEIGHBORHOOD RANKINGS AND
NEIGHBORHOOD FILTERING
1962-1970

TRACT	RANK 1962	RANK 1970	FILTERED DOWN RELATIVE TO
2120	21	18	2168, 1082
2121	15	19	2120, 2123, 2168, 1082
2122	10	9	2123, 2200
2123	15	4	1082
2136	32	25	
2137	12	13	2123, 2198, 2200
2138	12	14	2123, 2198, 2200, 1082
2141	29	30	2136, 2168
2142	20	23	2120, 2168, 1082
2143	25	29	2136, 2169, 2168, 1072
2157	8	8	2123, 2200, 1082
2158	1	1	
2159	6	12	1082, 2122, 2123, 2151, 2198, 2200, 1073
2160	22	23	2168, 1082
2161	14	16	2123, 2198, 2200, 1082
2162	2	3	1082
2169	27	28	2136, 2168
2170	28	31	2136, 2141, 2168
2166	5	5	2123, 1082
2167	4	19	2157, 2159, 2161, 2166, 2168, 2198, 2120, 2121, 2122, 2123, 2137, 2138, 2200, 1073, 1082, 1083
2168	30	17	
2139	31	32	2136
2197	3	6	2123, 2166, 1082
2198	19	11	1082
2200	17	7	1082
1072	26	26	2136, 2168
1073	9	9	2122, 2123, 2200, 1082
1074	24	27	2136, 2168, 1072
1075	18	22	2120, 2168, 2198, 1082
1076	11	21	2168, 2198, 2200, 1082, 2120, 2121, 2123. 2137, 2138, 2161
1082	23	2	
1083	7	14	2200, 1073, 1082, 2122, 2123, 2137, 2138. 2157, 2198

percent of the variation was explained solely by variables 1 through 4 -- those related to race. The median age of housing and income variables each explained only a bit over 1 percent of the variation.

Thus, among these neighborhoods in which racial change was occurring, and in which changes in status were occurring only after racial change, the racial factor was the dominant explanation for changes in price differentials between neighborhoods. The findings of our short-term cross-sectional analysis were thus in agreement with the short-term analysis for University City alone.

This, we feel quite confident, suggests at last a solution to that most intractable of problems which has confronted study of the succession process -- the relationship between racial exchange and socio-economic, or income level as determinants in neighborhood transition. Racial change in adjoining neighborhoods is perceived by households as a harbinger of value-change, specifically of passive downranking. It is the initially dominant impelling factor, and in short-run analysis (or where rapid transition is under study) it will emerge with primacy.

This finding, of course, agrees with the observations of our University City/ Walnut Park direct-interview survey -- and indeed with the "common-sense" interpretation of neighborhood change. But this is as far as folk wisdom can carry the analysis, and it is the least important part of the finding. For we also conclude that far more basic to the household-preference bundle than racial considerations is an acceptably high socio-economic level in the neighborhood -- a factor which appears statistically as median income or median decile rank. In any long-term analysis it is this consideration that emerges with undisputed primacy, and often -- where special circumstances obtain -- in short-term analysis of rapid transition as well. In the end, householders black or white do not object to a racial mix so long as neighborhood standards are maintained at an acceptable level and have expectations that they will remain acceptable.

C. Wellston: End-State Fulfilled

There remains one operative aspect of our model to be observed -- the full-cycle course of arbitrage to the point of abandonment. This cycle was consummated in Wellston, the county area directly north of University City and thus also in the path of the westward-moving transition out of St. Louis City.

In Table 20, we replicate for Wellston the data of Table 18 dealing with University City, except that median decile ranks (R) are available only for a few years. We will not repeat here the data derivation (see preceding Section A of this chapter), except to note that the comparative price base (100) is again Tract 2157 of University City. The time period is again the 11 years 1961-1971, but it is worth recalling from our earlier Chapter 1 of this Part Two that the income decile rank in Wellston had begun to fall in 1959: what we are observing, then, in Table 20 is second- and third-stage transition. The second stage, with price rise followed by decline, is seen in the years 1967-1971, and in this latter period it will be seen that the price average drops by 50 percent in four years. It is also to be recalled that Wellston was not ever a high-value housing area; in 1940 it ranked 12th in median value among the 15 neighborhoods studied and by 1970 had fallen to last place -- even below Kinloch and Soulard-Lafayette.

TABLE 20

Wellston Owner-Occupied Turnover (T), Price Indices (P), and Median Decile Rank (R)

	All Tracts			Tract 2139		
	T	P	R	T	P	R
1961	9.1	--	5	8.3	--	6
1962	9.9	64		9.7	64	
1963	13.0	74		13.8	64	
1964	14.0	71		12.5	62	
1965	16.4	62		18.7	61	
1966	13.8	63		17.0	59	
1967	15.8	78		18.3	73	
1968	20.8	52		19.0	48	
1969	22.3	59	4	23.2	47	
1970	14.8	38	4	16.6	38	4
1971	12.7	39		12.1	30	4
% Change in Price	-39.8%			-46.9%		
Change in % N.W.	62.5			62.2		

The fluctuations of turnover and price in the above table are best observed graphically in the following section of this chapter (see Figures 18 and 19). There, in the statistics for all tracts, we see three successive waves, two of which are precisely matched: in 1963 and again in 1969,both turnovers and price-level take marked upward turns, followed by declines. In 1965 there is a considerable increase in turnovers not matched by a price leap until two years later, in 1967. The somewhat anomalous Tract 2139 follows the same pattern but with two exceptions: the price rises of 1963 and 1969 do not register in this tract.

These ups and downs in turnover rates and prices reflect, of course, successive waves of out- and in-migration, during which the racial composition of the population of these tracts changed fundamentally. The percent non-white for all the tracts changed from 8.6 in 1960 to 71.1 in 1970, for Tract 2139 from 8 percent to 70.2 percent. The falling decile rank and declining values after 1967 indicate that black households of successively lower socio-economic (and probably median income status) were moving into Wellston.

The most interesting figures in Table 20 are those showing that the maximum price level attained in the period is that of 1967, and the maximum turnover is that of 1969, which is followed by a precipitous drop in values. These high spots of market activity are to be explained by the 1966 change in FHA loan requirements, a matter fully presented in the second section of the following chapter. At this point, suffice it to say that the policy change of 1966 inspired greatly increased loan activity in transitional neighborhoods, which — in the pattern we have consistently observed -- stimulated temporary price increases. The 1967 peak in prices represents the initial impact of the new policy; the 1969 turnover peak represents its full implementation.

From a welfare standpoint, however, perhaps the most pertinent figures to be derived from Tables 18 and 20 are the totals of turnover rates for the period, as below:

	Tract	Total of Annual Percentage of Owner-Occupied Units Changing Hands in the Period 1961-1971 11 Year Total
U. City	2159	104.7
	2160	104.8
	2161	103.5
	2157	99.5
	2158	82.4
	2162	77.3
Wellston	All	162.6
	2139	169.2

In Wellston Tract 2139, what the figure means is that, had every owner-occupied house changed hands once during the period, almost 70 percent would have changed hands twice: since, of course, a large fraction of houses did not change ownership, many units clearly experienced multiple transfer of title. In University City, only those tracts abutting its north and east boundaries reached this level of statistical certainty of a second transfer, and there at a maximum 4.8 percent. The very high level of multiple transfers evident in Wellston is the statistical evidence of repeated individual loss — the loss of equity, the cost of moving again, the cruel frustration of family aspirations.

Finally, from Tables 18 and 20 and from Figures 17 and 19, following, it is instructive to compare the post-1966 price experience of Wellston, where no controls were effected, and University City, where occupancy ordinances were imposed in 1966 (a watershed year in our study, since that was also the date of the relaxation of FHA loan-insurance standards). In Wellston, as we have noted, there is a value loss of 50 percentage points in the four years 1967-71, markedly visible

in Figure 19. In University City, on the other hand, four of the six tracts move within a range of only 10 percentage points between 1966 and 1971, and a fifth (Tract 2161, abutting the West End) drops 16 percentage points. The sixth University City tract (2160, abutting both Wellston and the West End) experienced a severe price decline in 1966 but had recovered 29 percentage points by 1971. The same severe drop normally would have occurred in Tract 2159 within two or three years, followed by a similar drop in Tract 2157 after a like interval: as we see in Figure 17, these losses did not occur, and we feel entirely confident in ascribing this fact to the 1966 local occupancy ordinances.

D. The Moving Boundary as Market Fluctuations

In the present discussion, we must apologize for an inevitable problem in expositional sequence: since not everything can be presented simultaneously, we have necessarily had to "get ahead of the story" somewhat in the foregoing. The following Chapter 4 will illuminate the references above to the FHA, while the present section will cast light on much of the preceding material in this chapter.

In our 1972 study, Urban Decay in St. Louis, the statistical component of our investigation was an analysis of rental activity and prices in sequences of time and geographical extension along specific streets within the city. This provided our first evidence of the moving boundary of arbitrage, as successive waves both of rental activity and of price movement were observed to occur along these streets. When our collected data were plotted graphically, we saw clearly that successive waves of transition caused the graph-line to shift abruptly with a ratchet-like movement. This is seen in Figure 14, which presents one of the graphs from that earlier study. The 5500 block of Waterman was chose because it illustrates with particular clarity a point made earlier: with rentals, the peak

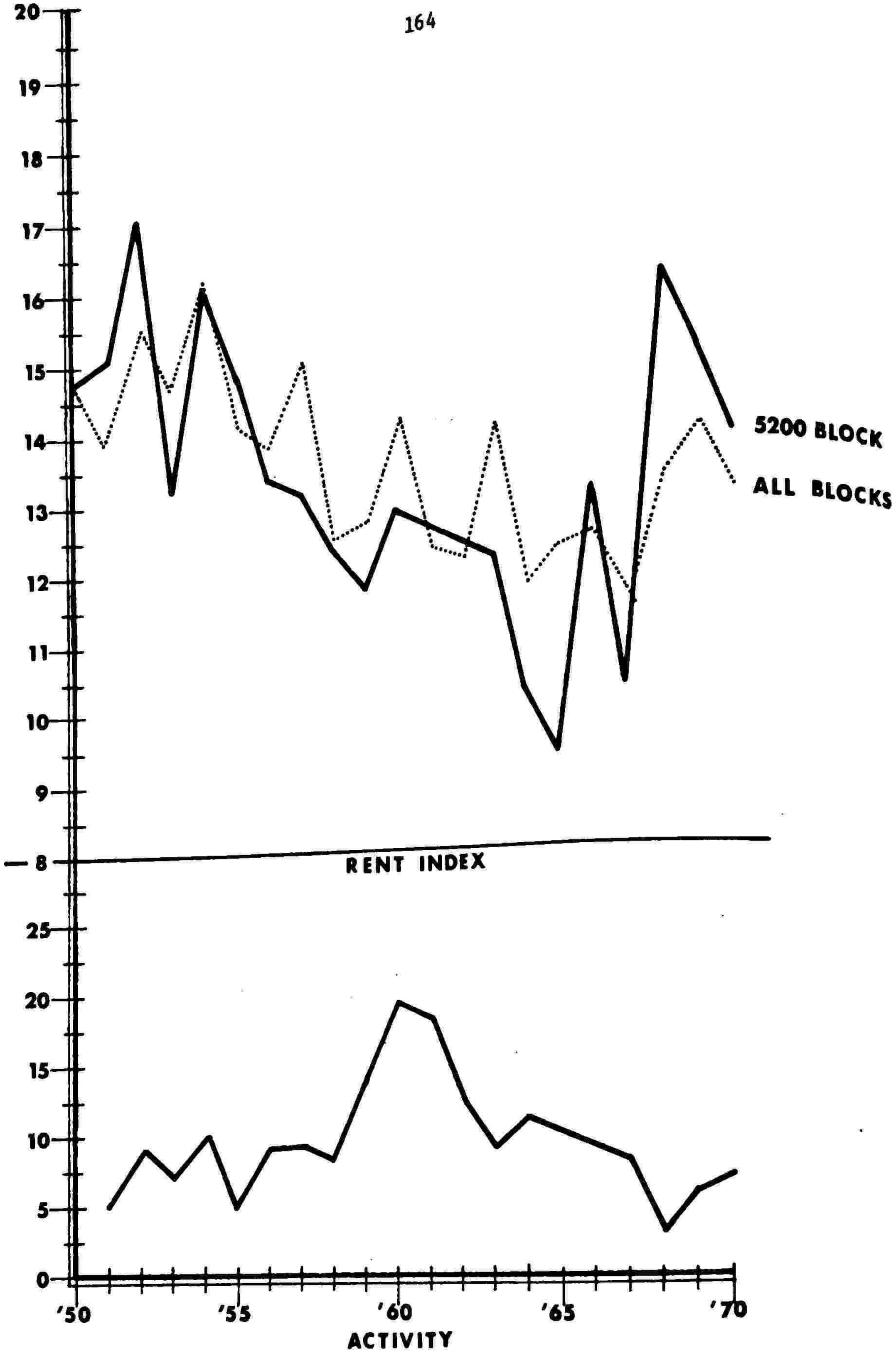


FIGURE 14 - WATERMAN: 5200 BLOCK

of turnover coincides with the lowpoint of prices (whereas with home sales the opposite is the case — increased activity brings temporary price rises.) The 5500 block is rather far out Waterman, and it is apparent how the advancing transition showed only as a long price decline until 1954, and then until 1958 mirrored the movement in other blocks but with a time-lag, after which it was in time synchronization with the whole of Waterman. This is the very paradigm of arbitrage.

Now, with the data presented in this chapter, we are able to replicate these graphs for University City and Wellston, as presented in Figures 15 through 19. The first three deal with University City, Figures 15 and 16 showing turnover rates for owner-occupied housing in the six tracts, in two groups of three, Figure 17 showing prices for all six tracts. In Figure 15, the transitional tracts are 2159 and, lying to its west, 2157; it is clearly seen how the activity in 2157 lags behind 2159. Tract 2158, most protected and least transitional of the six, lags yet further behind 2157. Tract 2160, easternmost of the three transitional tracts, moves fairly synchronously with 2159 (to see this, of course, requires comparison reading with Figure 16). In Figure 16, the three tracts are seen to move more or less together until 1965, after which each seems to move independently of the others. Actually, however, only Tract 2161 -- a "split personality" tract, part transitional and part protected high-income -- moves independently: as noted, Tract 2160 is moving with 2159, while a comparison will show that Tract 2162 is moving with the other high-income tract, 2158 (on Figure 15).

This similar grouping of high-income and transitional tracts is again apparent in Figure 17, which shows price movements for all six tracts. Again, however, the reading of these graphs becomes truly interesting after 1965. Let us regard Tract 2160 -- abutting both the West End and Wellston -- as the barometer tract. We

Figure 15

Turnover Rates for University City Tracts
2157, 2158, 2159

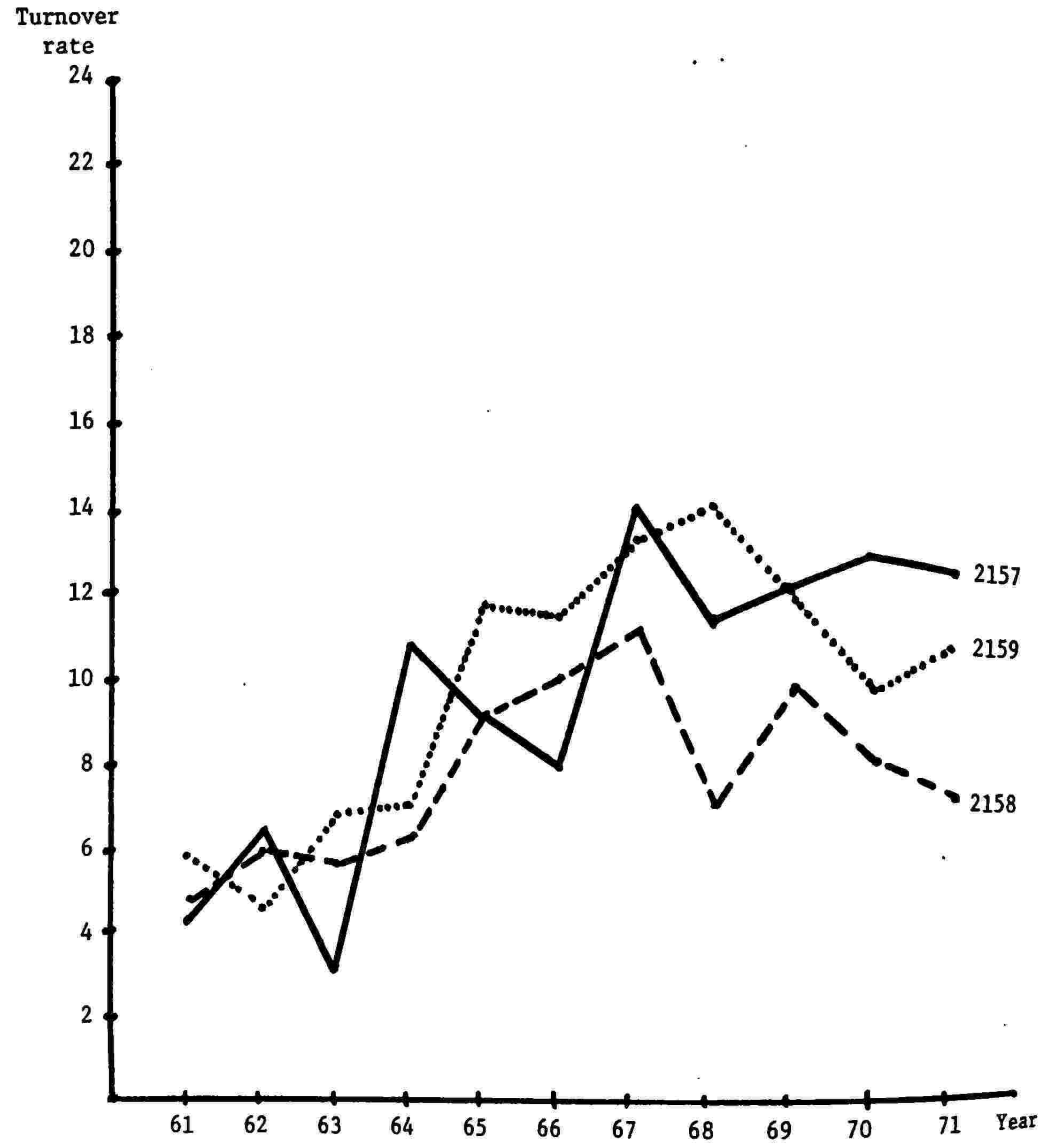


Figure 16

Turnover Rates for University City Tracts
2160, 2161, 2162

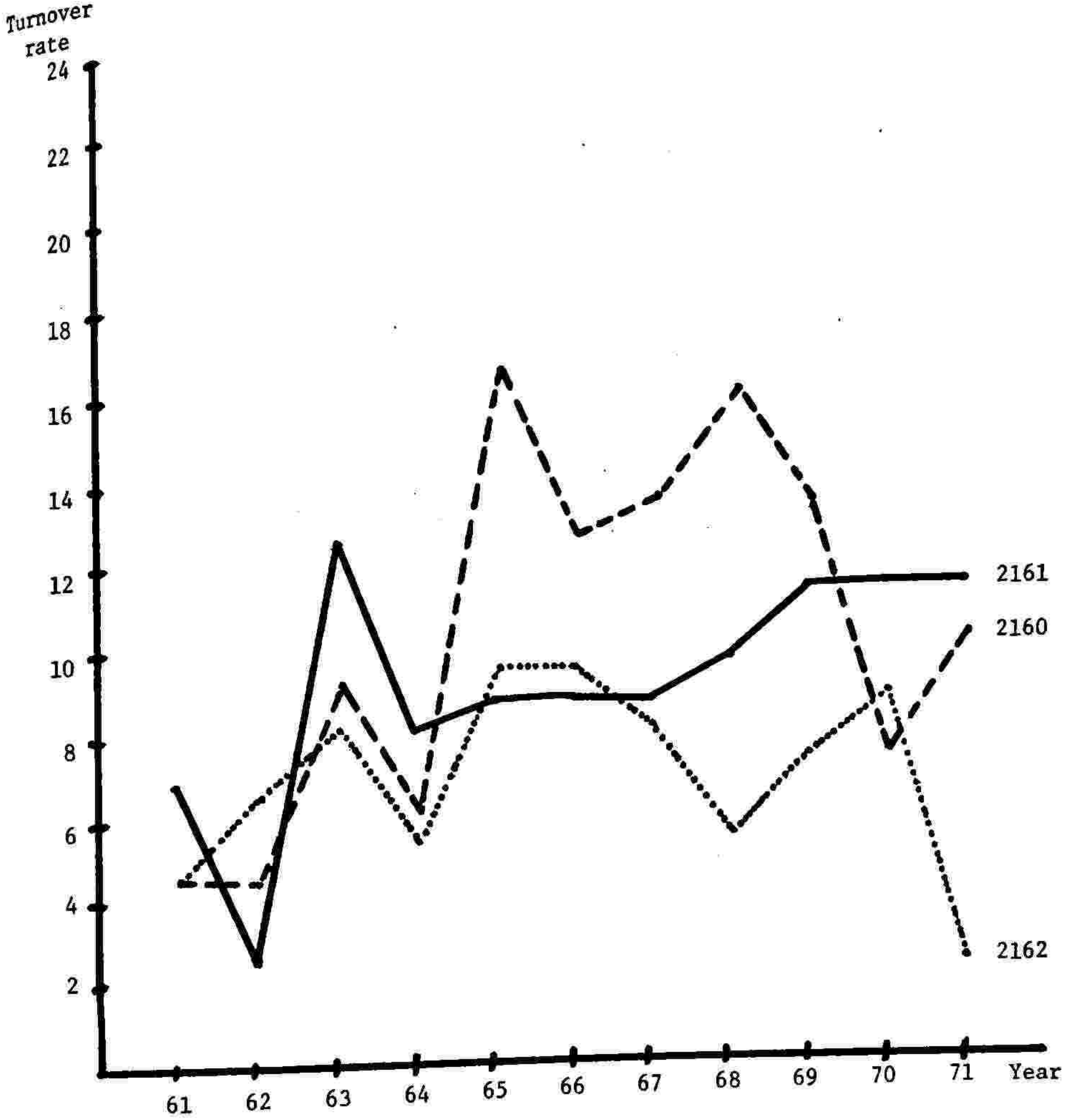


Figure 17

Price Indices for University City

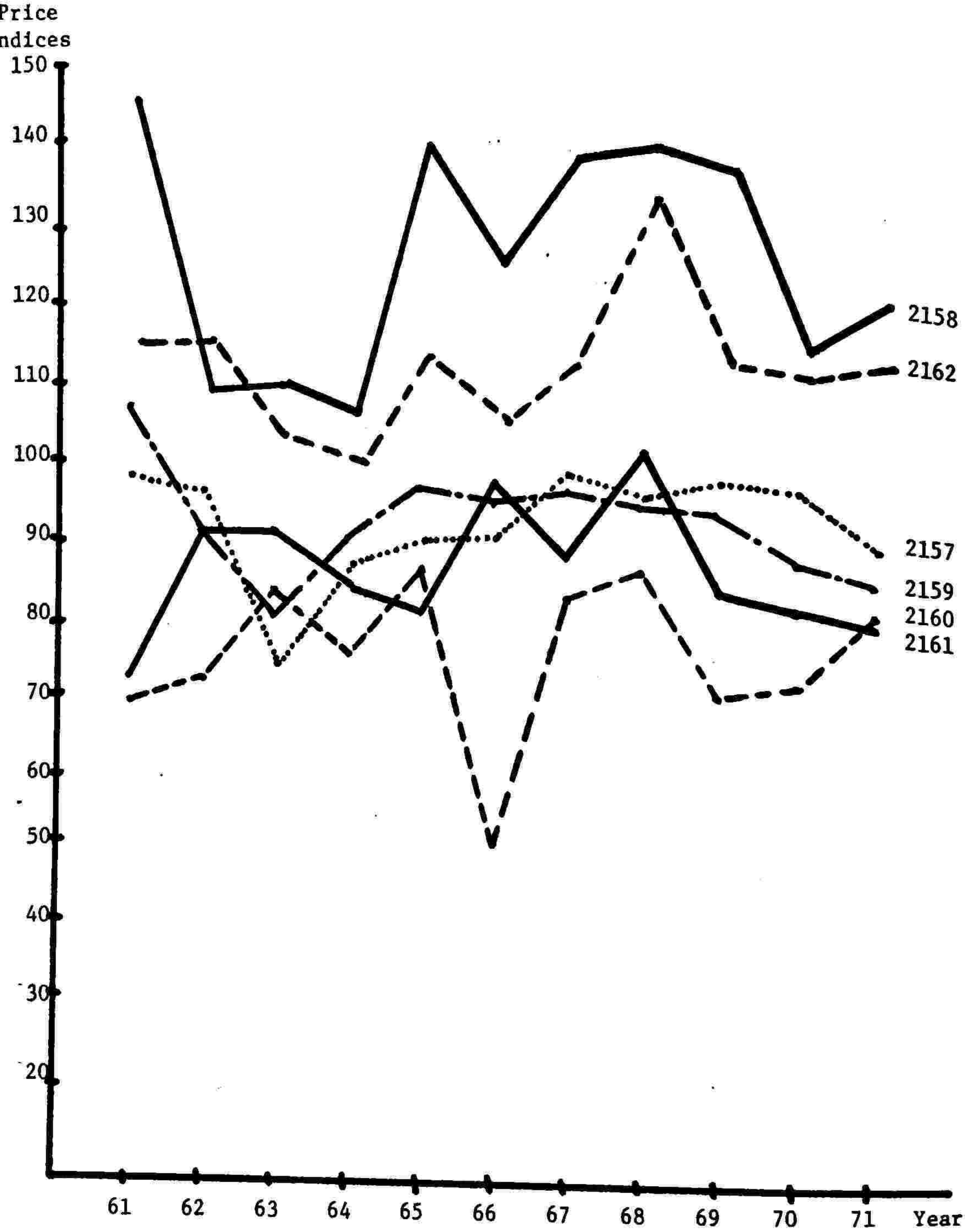


Figure 18

Turnover Rates for Wellston

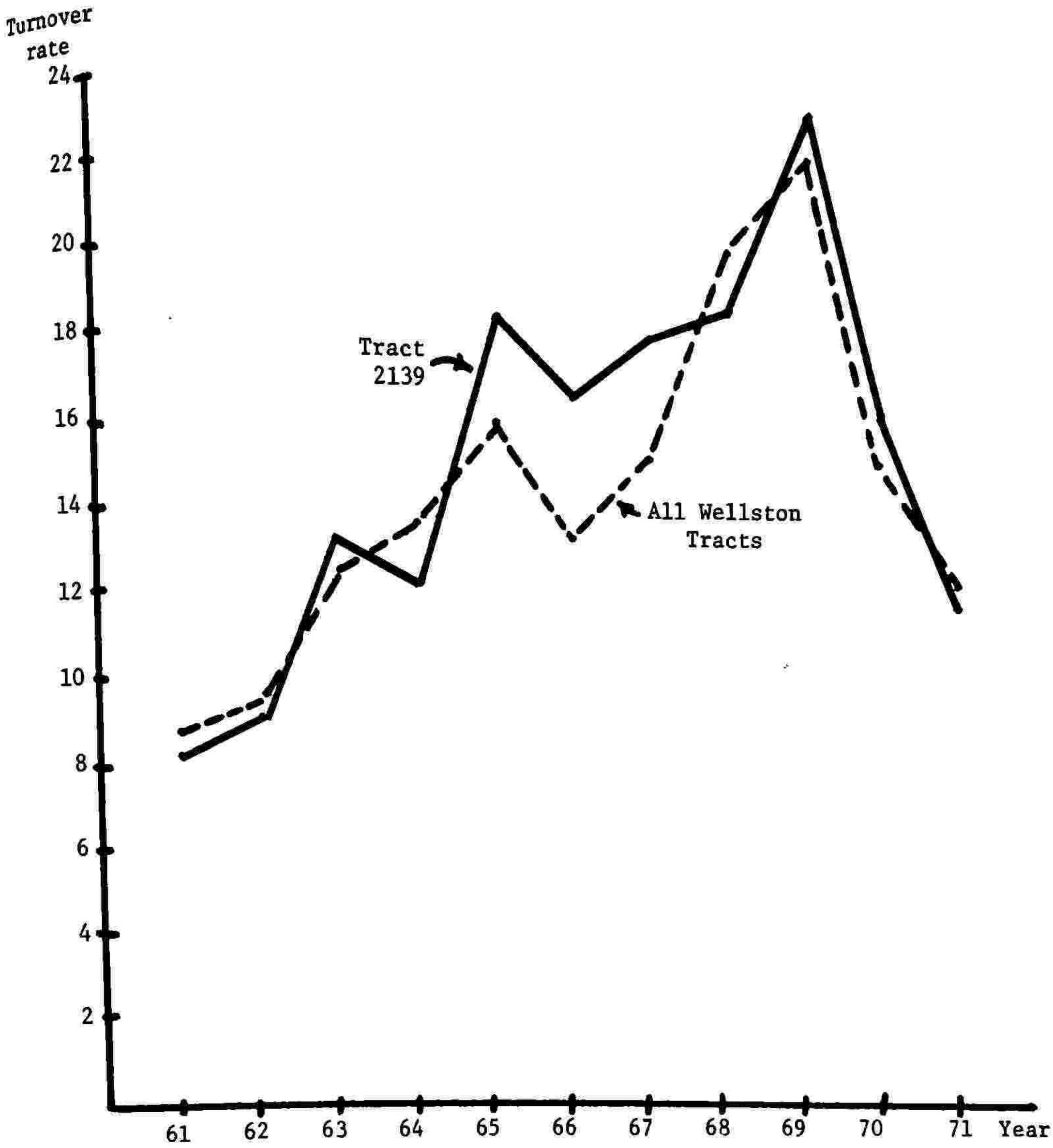
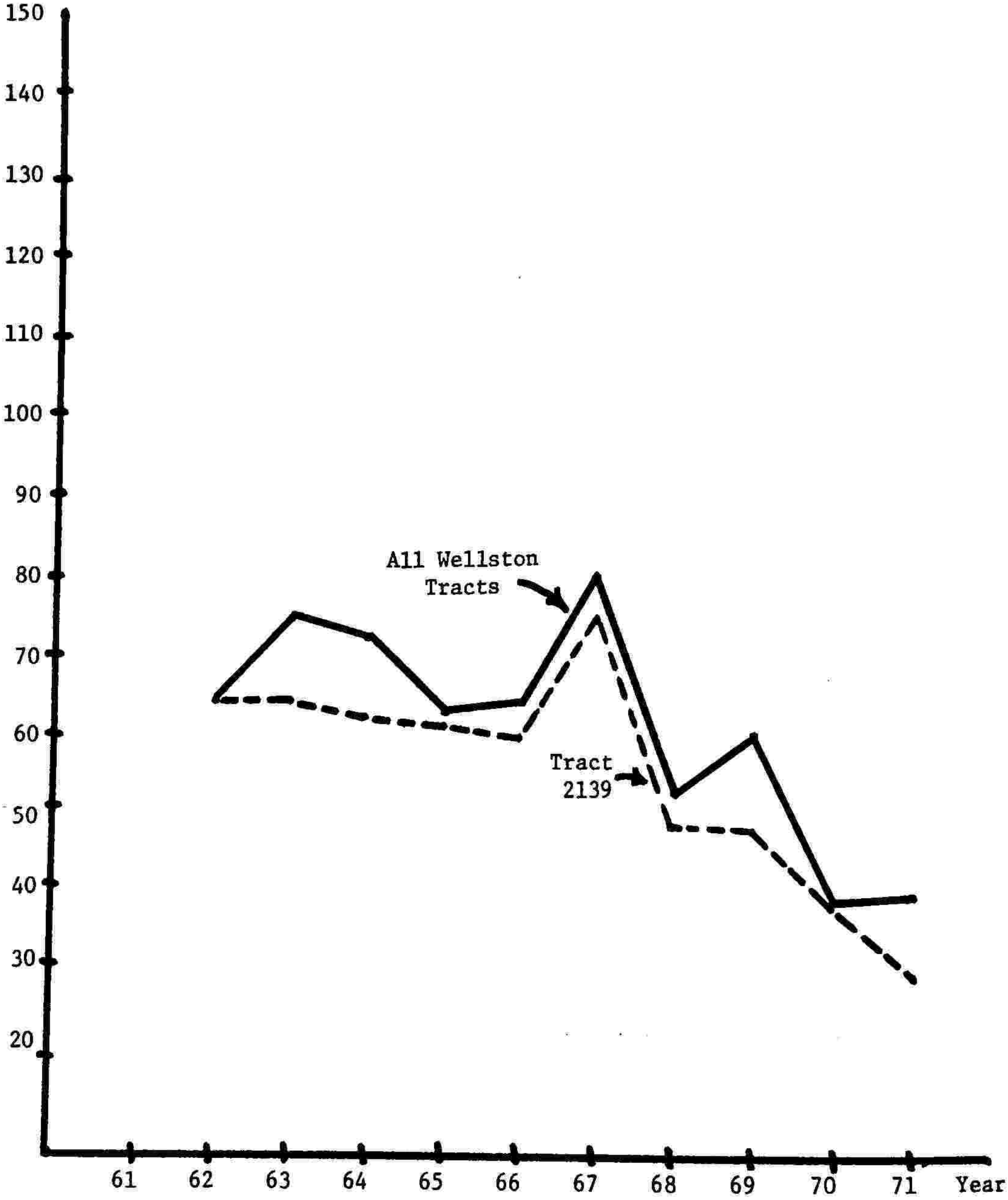


Figure 19

Price Indices for Wellston



note that in 1966 it experiences a severe price break of over 30 percentage points. In the normal course of things, Tract 2159 and then Tract 2157 would have followed with successive similar breaks: but this did not occur. This suggests the impact of the occupancy ordinances.

The high-income tracts, however -- 2158 and 2162 -- representing white professionals acutely aware of what was happening in Tract 2160, are seen to react out of expectation, selling out, "escaping," and so effecting the very price decline they feared. The 1966 price break in Tract 1960 was matched by a significant decline in income level, whereas of course no such decline occurred in Tracts 2158 and 2162. Nonetheless, from 1966 continuing on through 1971 the high-income tracts will be seen to mirror the price movement in Tract 2160, though at a higher value-level. These plotted lines may be regarded as a graphic representation of expectation.

The peaks and lows observed in University City in Figures 15 through 17 are not to be thought of as representing successive stages of transition, although clearly the price peak of 1965 did mark the first stage. The controls of 1967, as noted above, established University City as a middle-income market, and the fluctuations thereafter represent market flurries in a kind of muted operation of arbitrage, in which expectation continues to function but where the true determinant of values, as we have observed, is and will be the adequacy of middle-income demand to sustain the values. This more than anything would seem to explain the indecisive and contradictory movements of the price lines observable from 1969 through 1971.

In Figures 18 and 19 we are indeed observing later-stage transition. The turnover peak of 1965 seen in Figure 18 represents the fulfillment of the second stage, followed by declines in both turnover and prices. The unbroken climb in turnover between 1966 and 1969 may be seen as gradual implementation of third- and fourth-stage transition, as seen in the drastic plummeting of prices after the peak of 1967 and the much lower peak of 1969. The continuing upward trend of turnover in Wellston between 1967 and 1969, two years in which prices fell 26 percentage points and then regained 6 (subsequently falling again 20 points) is not contradictory, as might appear. The 1966 FHA ruling and the subsequent "high risk" program brought a large influx of low-income inmigrants to Wellston, which inspired the 1967 price peak. But the immediately following price drop brought an even larger group of yet lower-income home purchasers, and this effected the low-level and equally ephemeral price peak of 1969.

E. Summary: The Model

We began by emphasizing that the concept "housing" is in fact a congeries, a bundle of dwelling characteristics to which householders react. The physical characteristics of the unit are certainly one set of these attributes, and one which is basic to the life-cycle requirements of the householder. But since these requirements may be met by any number of units in an array of locations throughout a metropolitan area, they are not the decisive elements of preference. Equally important determinants of choice, we postulated, are the set of components we call neighborhood characteristics.

We then redefined the filtering concept to accord with these premises. It is households themselves, not the housing, that filter in our definition; and since the change may be up as well as down, we prefer to speak of upranking and downranking as the two directions of "reranking." But there are also two modes of reranking -- active (a voluntary move) and passive (where the household does not move but experiences reranking nonetheless). We insisted that the preference bundle includes a component of expectation -- the assumed future stream of utility of the unit -- and it is this element of householder preference (or perception) which is most sensitive to the threat of passive downranking.

Our arbitrage model may be viewed in two perspectives. It may be considered and used analytically as the operation of these household-preference orderings and intensities in a market cast into disequilibrium by a mismatch between supply and demand. Or it may be considered and again used analytically solely in market terms, as a transactional sequence typical of such a disequilibriated market. To repeat: arbitrage describes the how of the contemporary succession process in U. S. urban centers, while the preference ordering describes the why. Viewed together, the two provide a more complete understanding of the process.

The arbitrage process describes a moving boundary between high- and low-status or income areas, where a protracted mismatch between supply and demand makes it profitable to convert from high-income to successively lower-income occupancy. End-stage is reached when values have declined so far that it is no longer profitable to maintain the units for occupancy; they are then abandoned, vandalized and eventually demolished.

Our studies have observed this wave-like cycle as a block-by-block advance along particular streets, as a sequence between coterminous neighborhoods, and as the transition of whole suburbs.

In our model, the process is triggered by a large-scale and/or protracted mismatch between housing supply and demand -- which may take many forms but which has typically resulted from the evacuation of high-density, middle-class urban areas by households removing to newly constructed, low-density suburbs under the stimulus of rising socio-economic status or incomes. The erstwhile white middle-class housing thus made available on the market has no corresponding demand and is therefore devalued. The demand which does exist is first -- and insufficiently -- from middle-class blacks; subsequently -- and massively -- from lower-income groups both black and white.

The pre-condition for arbitrage in our model is, then, this market mismatch -- produced as above or through other circumstances. But the <u>dynamic</u> of the process is provided by the expectation component of the preference bundle: what might otherwise be an orderly market transition is accelerated into panic disorder by householders' anticipation of racial exchange and consequent deterioration of neighborhood conditions and values. It is this dynamic that makes possible rapid and large-scale transition involving whole neighborhoods and whole suburbs. And in the same way that it is self-fulfilling it is also self-generating: it is the expectation dynamic that continues to activate the process, in an ever-extending front of transition, long after the initiating supply/demand mismatch has ceased to obtain in the market.

Yet more fundamental to the process, however -- indeed, it is the underlying source of the expectation dynamic -- is that element of preference which is shared by all households of whatever status, the desire to reside in a stable, family neighborhood where acceptable standards of upkeep and conduct are maintained. As all our studies have demonstrated, this overriding concern with neighborhood conditions is expressed statistically as median income-level: in any long-range study of neighborhood change, when the aberrant flurries of rapid transition have as it were settled out, this single element of preference emerges as the prime determinant of housing values. Median income-level dominates all other indices of preference -- age of housing, racial mix, access, public services, type of occupancy or age-composition of population -- as the key to median housing value, whether observed as gross price or as a premium/discount differential in moving costs. Our model does not present income-level as a conscious impelling element in household decision, but also it is not to be regarded as an artificial construct of the statistical method: quite simply, in the long run it is the one index of neighborhood socio-economic level which subsumes the whole complex of conscious, explicit preferences, however individualistic or gross these may be in overt statement.

The St. Louis experience from which our model is derived admittedly exhibits certain aspects of idiosyncrasy, and even within this single metropolitan area we have observed situations where the model does not appear to apply. For example, in Webster Groves and Kirkwood we have noted small areas of concentrated, long-term black occupancy of low income-level which have not resulted in moving boundaries within the community. From these two cases -- too few and untypical for valid extra-polation -- we suggest that the operation of arbitrage requires a large-scale thrust of transition.

Still, in its general geographic and demographic configuration, the St. Louis metropolitan area is not untypical of the large urban centers where neighborhood transition has occurred or is under way. We postulate with no small degree of confidence that our model will be found to have useful application to these other metropolitan areas.

Clearly, this summary has traced only the broad outlines of our model. In the preceding chapters we have remarked on many ancillary contributing factors -- notably the practises of lending institutions and real estate agents that serve to intensify and concentrate the transition process. Only in passing, however, have we made reference to the central position in this history occupied by the Federal Housing Administration. In the following, penultimate chapter we present a specific study of the FHA contribution.

Chapter 4

THE ROLE OF THE FHA

The account of how federal housing policies and programs in the decades following World War II impacted on the market to speed the process of neighborhood transition in urban centers is a lamentable one -- whether considered in its general outline or when traced down to the particulars of social disbenefit visited upon this or that class of households.

It is also a complex and to some degree mitigating story in that it involves the interaction between two quite different goals which federal policy sought to satisfy: one of these was to meet the enormous backlog-demand for new middle-class housing accumulated during the Depression '30s and the wartime '40s; the other was to provide housing for the poor. The first of these goals was the least beset with difficulties, and it was achieved with immense success. As for the second, it must be said in mitigation of the FHA's record that nobody -- after three decades of strenuous theory and practise -- has yet come up with a satisfactory answer to the problem of housing the poor. An honest judgement of the federal effort in this regard during the '50s and '60s must charitably acknowledge that at all times the policies and programs pursued had the best of social intention. <u>They meant well</u>; unfortunately, the more well they meant the more ill they produced.

A thorough analysis of this history would, of course, require a separate volume. Here we can only suggest the main lines of consideration, with emphasis on those most relevant to our discussion. There are two such fundamental approaches to understanding the FHA role. The first, which we have already suggested, has to do with a basic inadequacy of theory; and this leads to the second, which is

the complicated account of how the policies implemented to achieve the two separate goals interacted to produce general and specific disbenefit. The main body of this chapter is a statistical analysis of a single item of such interaction (the 1966 modification relaxing the "neighborhood standards" qualification for obtaining FHA-insured mortgages). First, however, let us briefly sketch the background of theory and history which will make the particular discussion more meaningful.

A. A Failure of Concept

We recall from the early pages of this report that the post war housing policy reflected the succession-theory concept that new construction inherently confers social benefit in that it releases housing units for use by the poor. This notion is, on the face of it, certainly true and unobjectionable; but it implied a reliance on orderly operation of the housing market and on a gradual devaluation of units typical of the slow succession process of the 19th Century and earlier. Certainly, it did not contemplate the rapid occupation of erstwhile middle-class housing by the poor, but rather a kind of "domino-theory" of housing succession whereby the housing of each income-level would succeed to the next lower level in an orderly way until, at the bottom of the scale, lower middle-income units would pass to low-income households, whose former housing would then become available to the indigent poor.

Those who formulated this policy and its early successors could not, of course, have predicted the massive migration to the cities of unskilled rural blacks which was to ensue, nor could they have foreseen the extent of the postwar affluence, a long period in which rising incomes outstripped the rate of

inflation. But as a result of these and related large-scale social phenomena of the '50s, the federal housing enactments had a very different impact from what had been contemplated.

As we also briefly reviewed in the first pages of this study, the mortgage terms and ancillary subsidies extended by federal programs made removal to new suburban housing almost irresistible in the 1950s to middle-class households, a category which in that same period came to include most skilled blue-collar workers. As a result, the programs did not produce a stimulated gradual evacuation of core-city housing but something more like a rout, a rapid depopulation of older high-density urban neighborhoods. And because the FHA terms for new construction were so favorable as to make them accessible to households far down the income scale, the market was deprived of the purchaser-sector which normally would have supplied the appropriate demand for the evacuated housing. Thus came about the market mismatch which we have described as the precondition to arbitrage. The only compelling demand which remained for the vacated middle-class housing was comprised of low-income households -- in short, the poor.

Much of what took place might have occurred without the federal programs, since clearly the time was ripe for very large-scale suburban development -- and indeed, without the government effort a truly <u>laissez-faire</u> market would certainly have been less precipitous and so might have produced some measure of the desired succession-effect. But as it happened, an important precondition which made possible rapid neighborhood decay and urban blight in American cities following the war was FHA policy, and it is only the first (if most monumental) of many ironies in the story that this resulted from an effort to provide better housing for all economic classes.

As we have noted in passing, other federal programs exacerbated the disordered market. The low-income demand was intensified through demolition of slum housing for arterials, for urban renewal, and (again, ironically) for low-income housing itself (since in those early days relocation requirements were laxly imposed). And this blind disregard of program impact -- almost, in the classic sense, the hubris that precipitates tragedy -- proceeded for decades as programs proliferated, were accelerated and expanded. In response to public pressure, the FHA terms for purchase of new construction were made ever more liberal and all-embracing, and at the same time as onetime middle-class housing was thus being made massively available to the poor, the authorities -- also on a massive scale -- undertook to provide new housing for the poor in huge projects that were themselves tragically misbegotten.

This failure to identify the realities of the postwar housing market thus compounded the theoretic or conceptual inadequacy of this policy and here it is less possible to take so charitable a view. Surely the ravaging effect of the syndrome of falling values, falling income-level and severe withdrawal of maintenance funds which we have described had, by 1955, become starkly apparent and yet was disregarded by the administration, which continued on its original course.

In the preceding sentence, we have mentioned the lack of adequate maintenance, to which we have often referred in this study as being a sort of pre-terminal causative factor, since it leads directly to abandonment and vandalism. But in a scenario only slightly different, the problem of maintenance might be regarded as the most central of all. Consider for a moment: had the vast sums which were

applied to building and operating the Bedford-Stuyvesants and Pruitt-Igoes been spent instead in a subsidy program of providing maintenance for the evacuated core-city housing, the city poor might today be housed in the kind of stable, single-family neighborhoods they most aspire to, and the cities might have averted the bulldozed acres of what only recently were such neighborhoods. Regarded from this viewpoint, the mass exodus of the '50s and '60s could have been seized upon as an opportunity to rid the cities of their slums and ghettos and to relocate the poor at a density which would have seemed to them luxuriously low, in a neighborhood setting acceptable both to the poor and to society and which, at least in St. Louis, could have obviated the absurdist program of school construction we have traced elsewhere.

Belatedly, the "235" and "Turnkey" programs represented thrusts in that direction -- but again, without regard for market realities. Neither of these programs -- even as the public housing projects before them -- made provision for maintenance. The home purchase programs, by the very terms of acquisition, required that the household budget be strained to the utmost merely to achieve occupancy; when repairs of a critical nature became necessary, there was no possible course but abandonment. Many low-income households suffered grievously in these programs: they lost what little equity they had; their aspirations were cruelly frustrated; they were forced again to seek acceptable housing and to undergo the cost of moving. Administrative naiveté at this level of thoughtless entrapment is not excusable -- and of course, apart from the disbenefit worked on individual households, the cost to municipal jurisdictions was both great and permanent.

Part of the fiasco of Pruitt-Igoe and similar projects was also due to inadequate provision for maintenance. Here and in the home-purchase programs it is difficult to comprehend the nature of the blind-spot except as an archaic paternalism -- the assumption that occupancy carries with it the obligation and the ability to provide upkeep.

The dismal record of these programs and policies -- all implemented with the rationalized objective of providing better housing — can now be turned to account only by taking to heart the lesson they convey. Housing for the poor cannot succeed merely by providing occupancy in four walls, roof and floor — however new, shiny-bright or cosmetically appealing. But at the same time, housing for the poor is not so special a problem. It is simply that, like housing for any other segment of society, it must satisfy the several elements of the household preference bundle — but in a supportive way. And its funding, its implementation in terms of eligibility, payment, insurance and upkeep must take into account and be geared to the realities of the housing market.

We turn now to particular consideration of a case underscoring this last point.

B. The 1966 Ruling: A Costly Kindness*

Very nearly all the separate items of administrative failure we have been discussing above are exemplified in the case we now consider -- and so also is the paradox of misdirected benevolence.

Prior to 1966 the requirements for obtaining a federally insured mortgage at FHA terms included three criteria of "soundness." The property itself must be sound and certified as worth the selling price. The credit rating of the

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*Source for this section is The Neighborhood Succession Process, Ibid., Chapter 4 by Hugh O. Nourse, "The Impact of FHA Insured Practices on Urban Housing Markets in Transition."

purchaser must be sound enough to make him an acceptable risk. And the neighborhood locale of the unit must be sound — meaning that the expected future stream of the property's value was such that it would never, over the life of the loan, be less than the remaining loan amount.

In 1966, however, this neighborhood qualification was removed by FHA ruling, although the requirements regarding the soundness of the property and of the purchaser remained in effect. Here again, the clear intent of this amended ruling was praiseworthy. It was meant to overcome the reluctance of lending institutions to negotiate mortgages in"redlined" areas, which were commonly neighborhoods in transition; to make more favorable loan terms (smaller down payment, longer amortization) available to purchasers in such areas where values had typically already declined so that the properties involved represented market "bargains"; to restore to owner-occupancy what threatened to become abandoned areas; and generally in these ways to make better housing available to good-risk but lower-income households. Who could quarrel with a policy change that had such admirable objectives and seemed so obviously long overdue?

But by 1966 the characteristics of the postwar core-city housing market had been fully revealed, and anybody with a working knowledge of that market not merely could have but should have raised serious objections to this policy, however well motivated it appeared to be. Let us discuss what could have been expected to be its effect.

There are two fundamental considerations. The first is to assess the probability of continued decline in value; the second is to identify the potential loser. We must assume that the value depreciation which has occurred and the reluctance to lend are not capricious but are based on some perception: if transition is not actually underway within the neighborhood it may be approaching

at close hand and in large scale; or, if lending has been withheld for a few months, there may be such outward signs of deterioration as abandonments and vandalism. There exists, in short, some real risk that at some point in the future the value of the property will fall below that of the remaining loan. But with a federally-insured mortgage, that risk is not borne by the seller or the lender: it is borne by the purchaser and the FHA Insurance Fund. For at the point where the loan value is no longer recoverable in the market,* the purchaser must either continue to pour money into a losing proposition or walk away from his equity investment. He has lost in either case, and if he has sufficient mobility to walk away, then foreclosure ensues and the government also loses, since it must assume the mortgage.

Who, then, would be expected to avail himself of these dubious bargains? Now it is not suggested that prospective purchasers would have thought the matter through with total clarity (indeed, how should they be expected to when the policymakers had themselves failed to do so?), particularly when lulled into a false sense of security by the notion of a federally-insured mortgage. However, as we have insisted, households are particularly sensitive to signs of neighborhood deterioration, and it must be assumed that for the most part they

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*This point is more likely to be reached early in the course of the loan than late. In the first place, FHA loans typically were for as much as 95 percent of the principal. In the second place, with loans of this type equity builds very slowly in the early years since the major portion of the annual payment is allocated to interest. Thus, a $15,000 house might have a $14,000 loan; if, by the end of the second year, the house has depreciated in value to $13,500 or lower, the residual loan already exceeds the market value.

would share the real estate brokers' perception of change, impending or underway. Since the purchaser households must still meet the same credit criteria as before the ruling change, they would be expected to seek housing in a neighborhood with a more stable future expectation and where they would qualify with equal ease. The new ruling, then, would have little effect.

If, however, the fall in value and the restricted credit which had been obtained had been the result of early racial transition — which, as we have seen, is normally comprised of middle-class blacks entering the community — then a different situation obtains. Other middle-class blacks, obviously, would not be deterred by this kind of change and would be inclined to welcome the opportunity presented by the new ruling. We would, then, expect a high ratio of post-1966 insured FHA mortgages to have occurred in transition neighborhoods and to involve black purchasers. As we shall shortly demonstrate, our statistical study found this to be the case.

But we can predict beyond this. As we have demonstrated, the middle-class black demand is insufficient to sustain a market, with the result that protracted vacancies increase after transition begins, values fall again, and low-income blacks, who present the only available market, enter the neighborhood. There then ensues a serious decline in income-level and values plummet. The situation would then be reached where the residual mortgage exceeds the value of the property, and those purchasers able to do so would pull out. Our second expectation — also confirmed by analysis -- is thus that a higher rate of repossession would be evident in post-1966 FHA-insured loans.

TABLE 21

FHA Insured Mortgages as a Percent of Turnovers

1961-1971

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Normandy*	.063	.172	.179	.230	.331	.246	.460	.220	.375	.498	.280
Soulard-Lafayette	0	.004	.009	.006	.016	.004	.009	.014	.107	.117	.021
University City	.053	.148	.159	.202	.234	.247	.567	.203	.253	.398	.203
Wellston	NA										
Walnut Park-Riverview Gardens	.048	.124	.094	.130	.192	.180	.413	.161	.295	.359	.222
Maplewood	.101	.304	.081	.233	.212	.298	.250	.158	.058	.208	.078
Richmond Heights	.058	.194	.140	.190	.226	.164	.286	.085	.156	.120	.094
Affton	.060	.186	.125	.220	.259	.180	.195	.044	.051	.058	.064
Baden	.023	.083	.080	.125	.156	.152	.141	.123	.096	.262	.303
Clayton	.042	.017	.072	.043	.059	.018	.038	0	0	0	0
The Hill	0	.017	.028	0	0	0	0	0	.025	0	0
Jennings	.051	.176	.142	.232	.229	.163	.221	.087	.106	.210	.107
Webster Groves											
"Old"	NA										
"New"	NA										

*Underline indicates increasing black population 1966-1971

Source: Survey of Real Estate Activity and FHA Regional Office in St. Louis

NA: Turnover data not available.

Thus, again, the effect of FHA policy was to victimize those it was designed to help, while the group that truly benefitted was the white middle-class homeowners who were assisted in escaping from a distress position. Now to the evidence.

In Table 21, we look again at the 15 neighborhoods of our long-term cross-sectional analysis (Part Two, Chapter 1). In the first five, underlined in the table, the black component of the population was increasing after 1966 while in the remaining ten the black population was either zero or stable. We note that in each of the five transition neighborhoods there is a marked increase in FHA-insured mortgages after 1966. In nine of the other ten, except for one or two anomalous years, there is an actual decline in FHA-insured mortgages after 1966. In Baden, however, there is a notable increase in 1970-71, and it must be pointed out that this occurred after the census measure of racial occupancy in 1970. The increase in Baden may well represent sales to blacks, which would not be unexpected since Baden abuts transitional Walnut Park-Riverview Gardens. Thus we see confirmed our expectation that the 1966 ruling would stimulate FHA mortgage activity primarily in transitional neighborhoods.

In Table 22, we note the number of FHA repossessions in the same 15 neighborhoods in the period 1965-1973 and we also show these as a percentage of total FHA loans over the period 1961-1972. We again see our expectation confirmed, since each of the five racially transitional neighborhoods shows a very much higher ratio of repossessions than the ten non-transitional neighborhoods. (The high percentage shown for The Hill is to be disregarded since it represents but a single foreclosure).

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TABLE 22

REPOSSESSION OF FHA MORTGAGES, 1965-1973

AS A PERCENT OF FHA ACTIVITY, 1961-1972

Study Area	Repossessions	FHA Activity	Percent
	St. Louis City		
Baden	4	235	1.7
The Hill	1	6	16.7
Soulard-Lafayette*	51	144	35.4
Walnut Park-Riverview Gardens	325	2,177	14.9
	St. Louis County		
Affton	5	473	1.0
Clayton	2	36	5.6
Jennings	37	576	6.4
Maplewood	15	177	8.5
Normandy	314	2,771	11.3
Richmond Heights	12	278	4.3
University City	223	2,177	10.2
Webster Groves	31	688	4.5
Wellston	92	174	52.9
ST. LOUIS CITY AND COUNTY	2,716	31,970	8.5

*Underline indicates racially transitional neighborhood.

Clearly, much of the judgement levelled against the FHA in this account represents the easy wisdom of hindsight, while many of the agency's transgressions must be regarded as the sins of innocence. In the early '50s at least, the exigencies of long-deferred new-construction demand were immense and it is understandable that the logistics of meeting this demand should engross the energies of the federal authorities. That was indeed a period of innocence, when the FHA saw its role as stimulating, or throwing open and enabling the operation of a private market sector. By 1966, however, the FHA was deeply immersed as a manipulator in the market (the ruling analysed above represents an effort to direct the course of the market) and that it should so signally have failed to sophisticate and update either its conceptual base or its appreciation of market realities is incomprehensible.

It is precisely in this context that we feel our present studies have sharp cogency for involved jurisdictions at all levels of government.

PART THREE

THE DIMENSIONS OF POLICY

THE DIMENSIONS OF POLICY

The foregoing sections of this report present the findings of a series of interrelated research projects which even now we are planning to extend. While there is yet much to be explored, the scope of our findings to date seems broad enough to support some degree of general assessment. This report represents a taking of stock of where we are, what we have learned, and what our findings imply for the setting of policy regarding the future of our cities as residential environments.

While our research and hence our findings apply most directly to the City and County of St. Louis, this particular metropolitan area may be thought of as a laboratory for examining the process of runaway transition and abandonment common to many American cities. Table 23 shows the twelve central cities of over 250,000 that had a net loss of housing units between 1960 and 1970, averaging 3.1%, compared with a reduction of 9.1% in St. Louis. Moreover, fragmentary evidence suggests that this process has not abated since 1970, but has continued apace in the more traditional "cities of decay." In fact, preliminary population estimates in Table 24 show that between 1970 and 1972, nine of the SMSAs with population over one million showed losses in population or growth of less than one percent <u>for the metropolitan area as a whole</u>. The significant number of new housing starts in those same areas (though at a notably slower rate than in the most rapidly growing SMSAs -- shown in Table 24 for comparison), at least up until 1972, strongly suggests a continuing high rate of neighborhood transition.

Selecting specific policy recommendations depends on an understanding of what has been and is happening, what the social sector for whom policy is being made really wants to happen, and on the political feasibility of various possible actions. We claim no special expertise at the second two of these factors, what people want and what is or is not politically viable. Accordingly, this concluding section of our report will not contain a specific list of recommended actions. This is something which can never be arrived at by research alone. At the same time, what we have learned about neighborhood transition does have very important implications for policy decision and we will elucidate those implications here. Our intended audience is local, state and Federal government officials and staff concerned with the problems concerned with urban decay and abandonment and neighborhood transition; relevant private institutions, mainly involved in residential construction and finance; and neighborhood organizations, civic groups, and community leadership itself. By making this report available to such groups, and by providing a forum for its discussion, we hope that these various groups and institutions will come closer to a common understanding of what is happening in mature American cities and so find it easier to come to a consensus on what can and should be done.

1. Housing as a Bundle of Commodities

Probably the most important single generalization we can draw from our work is the need to treat housing as a bundle of attributes, necessarily purchased jointly. It seems clear to us that much of the error of housing policy over the past several decades stems from a failure to recognize this complex nature of the housing commodity and the multi-dimensional nature of the demand for it.

TABLE 24

SMSAs of over 1,000,000 Population
with slow (less than 1%) and fast (over 5%)
growth from 1970-72

SMSA	Population 1970	% Change Population 1970-72	New Dwelling Units 1970-72 per thousand population
New York	9,974	-0.3	13.0
Los Angeles	7,042	-0.6	20.5
San Francisco	3,109	+0.7	32.3
St. Louis	2,410	-0.4	19.8
Pittsburgh	2,401	-0.2	11.6
Cleveland	2,064	-0.9	16.1
Seattle	1,425	-1.8	16.2
Cincinnati	1,385	+0.5	26.4
Buffalo	1,349	+0.3	16.1
Houston	1,999	+6.2	43.4
Atlanta	1,596	+5.5	72.8
Annaheim	1,421	+7.5	64.0
San Diego	1,358	+6.3	71.8
Miami	1,268	+5.0	77.8
Denver	1,239	+6.5	80.7
Tampa	1,089	+9.2	86.2
San Jose	1,065	+5.8	49.9

NOTE: Figures for Los Angeles and San Francisco are for those entire SMSAs, as defined, but do not reflect continuing growth in adjoining SMSAs; for example, San Jose and Annaheim.

At least since the Housing Act of 1936, the focus of housing policy has been on the concept "a decent home for every American". But while other factors certainly have been mentioned, what this has continued to mean has largely referred to the sturdiness of "four walls" and the features contained within them. Structurally adequate housing can scarcely be questioned as a goal for all families, and it is not our intention to do so. At the same time, we are prepared to argue that the very naivete of the concept has in large measure inhibited policies aimed at achieving it.

Mainly the naivete lies in the underlying assumption that if all households lived in a decent home they would (at least within the limits of their ability to pay) be satisfied with where they live. With changes in income, tastes, job location, or family composition, families surely would move from time to time; but these moves would be from one plateau of satisfaction to another, with families more or less staying put unless there were a change in their <u>personal circumstances</u>. Seen from this vantage point, neighborhoods too, would show marked stability in their socio-economic characteristics, though different families would be filtering through them as the socio-economic status of particular families moved up or down. Changes in the physical characteristics of neighborhoods ordinarily would be slow indeed, responding only to a changed orientation to work places or other important metropolitan features and/or to the aging of the housing stock itself. But our research has revealed that the pace of such change under such circumstances would be glacial — measured at least in decades, or maybe half-centuries — compared with the pace of the dynamic we have seen unfold in St. Louis in the past 10 to 15 years.

What we have found missing from this simple paradigm is that people care about more than just housing structure. As discussed in detail in Part II of this report, even in a situation where nothing has changed in a family's personal circumstances or preferences, or in the physical nature of their housing unit, the neighborhood in which they live may undergo "downranking," providing them with a powerful motive for seeking housing elsewhere. Short of their being willing or able to make an immediate move, home owners in the interim would be strongly disinclined to continue maintainance investment. The same reluctance would apply with even greater force to landlords confronted by tenants eager to move out of the neighborhood. A drop in maintainance or reinvestment standards, even if far from universal, would in turn produce further downranking as perceived by still others in the neighborhood, leading to still further disincentives to invest in property maintenance, and so on.

As discussed in Part One, a variety of factors could produce initial downranking. For example, changes in public service quality or tax rates, perhaps stemming from changes in entirely different neighborhoods in the same taxing jurisdiction, could produce an initial flux. So too could a change in a neighborhood's transport access. Whatever the cause, the consequence is likely to be a shifting socio-economic composition of the neighborhood itself, triggering still stronger response, as discussed in Part II. The offering of more favorable terms for housing finance in other neighborhoods could be expected to serve as an especially powerful initial mover in a given neighborhood. And the providing of more attractive financing alternatives -- mainly in suburban new sub-divisions -- was a key feature of Federal housing programs in the Post World War II period.

In retrospect, it seems clear that the heavy focus on FHA and VA financed new middle-income suburban housing stemmed directly from the "four-walls" concept of national housing policy. Let us recall the challenge of the immediate postwar period. First, deferred maintainance, which began in the Depression '30s and continued through the period of wartime shortages, caused a large proportion of the housing stock to slip to a substandard level. Second, expected higher rates of family formations, higher birth rates, expected undoubling of households, and simply higher incomes and liquid asset accumulation indicated an increase in the demand for additional housing units of mammoth proportion. The challenge: to devise a program that would simultaneously move substantial numbers of families from substandard to standard housing and satisfy the huge demand for net growth of the housing stock.

From that vantage point it is not hard to see why a policy aimed mainly at improving the worst housing was not very attractive. The required per unit subsidy would have been large indeed, so that for a given budget the number of units that could be upgraded would have been limited and the total housing stock probably would have grown very little -- perhaps even declined if unavoidable demolitions exceeded an unsubsidized rate of new construction. Subsidizing the financing of new housing for middle income families appeared much more attractive. The required subsidy per unit to induce purchase of new housing as opposed to improving old units was much smaller, with the prospect that substantial additions to the housing stock could be achieved with a given budget. Moreover, since the older housing vacated by new home buyers would be available to slightly lower income groups, and since their vacated housing would be available to still lower groups, the "domino" principle described in the immediately preceding chapters would make it possible for almost everyone below the middle class to move up a notch in housing quality.

This policy might have been an unqualified success if the process had been even relatively as gradual as in the historical experience, and if families were in fact concerned only with the physical quality of their housing. But as we have detailed in this report, the transition was swift and it did not proceed gradually down the scale of socio-economic status, but leapfrogged from middle-income to low-income occupancy. This rapid shift typically produced an eroded central city tax base, with consequent reduction in the quality of public services; and, by introducing large numbers of low-income households into middle-class districts, it produced an abrupt and basic change in perceived neighborhood character. The result was a passive downranking of the housing bundle — in dimensions relevant to virtually all types of families — independent of, and typically in advance of, any actual change in the physical characteristics of the housing.

Once this passive downgrading had occurred, there was an understandable reluctance to reinvest in the maintaining of constant structural quality on the part of landlords or of families at any income level. This unfortunate consequence was reinforced by two additional considerations. First, the fact that housing in changing neighborhoods for the most part was at least 20 years old (virtually no new construction had taken place through the '30s and '40s) meant that maintainance costs as a proportion of total costs of occupancy under constant quality were much higher for old than for new housing. Accordingly, it was especially easy to disinvest in such housing rapidly. Second, some number of lower-income families, and indeed some landlords, no doubt based their bids to purchase or rent mainly on deflated capital costs, without taking into account the burden of rising maintainance costs. These forces combined with those noted above to produce the cycle of decay and abandonment we have witnessed. Then, as people had the chance to observe this sequence over and over, the dynamic of

their expectations added fuel to the process, so that neighborhoods which from all outward appearances still had decades of useful physical life were completely depleted in periods as short as a year or two.

The foregoing, we submit, is the foolish side of our policy heritage; the belief that once structural decency is made a neighborhood reality the quality level will necessarily be maintained, and that so long as structural quality is maintained the neighborhood will continue to be regarded as a sound one. The cruel side of the same coin can be found in our urban renewal policy, a sad story often told and now familiar.* Suffice it here to note that the irrationality of the belief that poor people could be helped by tearing down large quantities of the only housing they can afford (replacing it with fewer and somewhat more expensive units) can also be explained only by a "four-walls fixation". Such a fixation led to the view that when a clear majority of the structures in a neighborhood became substandard there was no alternative but to destroy the neighborhood itself.

The point here is to underscore once again the necessity for housing and neighborhood-conservation policy to recognize housing as a bundle of attributes, among which the structural attributes are but one important part. This discussion may seem overly extended for what should be so obvious a point. We think not. It is one thing to get people to recognize at an intellectual level that more than structural quality makes a difference to families in their residential choice and their behavior vis-avis maintainance and reinvestment. It is quite another to get them to understand why they must never forget this when they are drafting

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*See Martin Anderson, The Federal Bulldozer (Cambridge, Mass; MIT Press, 1964).

policies for housing improvement and neighborhood conservation. Even now, we have just seen the passage of a tax measure (the Revenue Act of 1975) providing tax credits for families purchasing certain newly constructed housing units. Perhaps at this moment the special needs for stimulating construction employment dictated such a policy. But did anyone involved in this policy choice consider its effect on older neighborhoods with which the new housing locations will be competing? Did anyone at any point consider providing tax credits to families reinvesting in older properties? Indeed, the declining population of many of our larger metropolitan areas makes it difficult to perceive a vital immediate need for more as opposed to better housing units. And, apart from isolated private redevelopments centered around historic preservation, how much serious consideration is given to strategic identification of ways to encourage reinvestment, or at least continued maintenance, in areas where physical quality is slipping, or perhaps merely feared to be in jeopardy, by giving attention to improving non/structural components of the housing bundle?

Until convincing answers to such questions become typical in the formation of housing policy, we feel that the need to consider housing as a complex bundle of attributes must be stressed over and over again. We also recognize, however, that achieving a more sophisticated view of housing as a commodity poses both a challenge and an opportunity. The opportunity is the possibility of producing more creative and more successful policies for neighborhood conservation and housing improvement by dealing with a number of the critical dimensions of the bundle simultaneously. The challenge, of course, is that the operative processes in neighborhood transition and housing selection, as discussed in Parts One and Two of this report, must gain wide understanding and acceptance. This implies, as well, a more sophisticated policy goal than simply "a decent home for every American."

2. An Extended Concept of Policy Goals

Everyone is familiar with the old phrase "a house is not a home," a genuine example of mother wit, since it's quite true. But it is equally true that a home is not a house -- or, more precisely, is not solely a house. In the preceding sections our research has indicated that the ideal of "home" appears to include much more; easy access, good public services, reasonable taxes, beauty and quiet, and a comfortable neighborhood ambiance.

Were it not for the strong evidence that people — all classes of people — care strongly who lives next door, even this expanded concept of "a decent home" could be described in purely physical terms. Added to a list of specifications of square feet per person, allowable materials for interior wall construction, etc., one might simply append a set of specifications for such items as pupils per classroom, required training of police officers, minutes from work, width of streets, decibels of permitted noise, etc. But unless we get a mutually acceptable mix of neighbors, even full realization of such an extended list of physical standards could not avert a game of musical chairs being set in motion. And as we have seen, we cannot be sure that this movement will necessarily settle into a viable assignment of people to neighborhoods. In fact, it may even lead to a collapse of the physical standards themselves.

Accordingly, our suggestions for an extended set of goals call for restating them in terms of how we want the process — which inevitably must always be to some extent in flux -- to function rather than in terms of some quite specific end-state.

For example, the objective of a decent home for every family -- which by no means do we wish to deny -- translates simply into "a continued increase in average housing quality." This represents a statement of the desired nature of the process rather than of an end state.

Since "ultimate achievement" is inadequate to meet immediately pressing social imperatives, we add a second goal, namely to lift as many families as possible above the minimum physical standard, consistent with other goals of housing and neighborhood-conservation policy.

A third goal, also dictated by contemporary social imperatives, is the rigid nforcement of open housing access, at least in the sense that by "open" we mean hat no one would be denied any housing option on any basis other than ability-o-pay. We are aware that "open access" <u>without respect to ability-to-pay</u> has een advocated. We will discuss this in a later section.

A fourth goal is to avoid the abandonment of capital which has remaining seful physical life, <u>where the non-viability of its economic life is related only</u> the functioning of the urban dynamic itself. To clarify, we recognize that andonment of physically useable property when it has become economically obso- te may be socially utilitarian. This would include abandonment of a production cility when society's demand for its product disappears or is drastically duced, or the condemnation of properties for civic improvement. It would in- ude the abandonment of housing in an entire community whose only viable onomic function -- say a remote air base -- has disappeared. It would also clude the demolition of housing units that are physically obsolete. But it es <u>not</u> include the abandonment (or a refusal to maintain, which inevitably mmits a property to abandonment) solely because of its being an undesirable

neighborhood -- that is, because of decisions taken with respect to investment in other properties affecting it by spatial proximity. It is this type of obsolescence that the process must avoid.

Closely related is a fifth goal, the avoidance of "costly" suburban sprawl. Obviously, families have differing preferences as to how much space they want to consume, so "costly" sprawl here does not mean simply low-density settlement. Instead we refer to discontinuous, leapfrog settlement stemming from speculative capital-gains motives of landholders; for this adds nothing to the amenity value of settled areas, it increases aggregate travel costs, and it adds seriously to costs of public utility distribution and system planning.

Finally, we approach the knotty task of specifying goals for public service levels (net of taxes paid) and for the "satisfactoriness" of a family's neighbors. Again, it should be remembered we are trying to establish socially effective processes rather than outcomes as goals. Accordingly, we are seeking adaptability of the public sector to people's changing preferences and changing abilities to pay. The question of how the process can assign families to locations so that in the aggregate people are as satisfied as they can be with their neighbors is yet more abstract. But both objectives can be subsumed under a simpler and somewhat more operational criterion, namely the minimization of windfall capital gains and losses on all properties in all neighborhoods. What we must do is define "windfall" in an operational way.

First, the elimination of windfall gains and losses does not mean a situation where all locational differences in property values (site rent

differentials) are eliminated from the urban market. The land-value component of properties in "socially desirable" neighborhoods are rightly expected to be permanently higher than in less desirable neighborhoods; there is nothing disfunctional in this. Also, we would expect values in any given neighborhood to change over time. Sometimes this would occur over a fairly short time period as when a new expressway, airport, or major industrial park development is announced. For the most part, however, such changes should be expected to be more evolutionary in nature, stemming from slow and continuous change of neighborhoods as a consequence partly of the aging of its housing stock, but even more from the evolving changes in the scale, shape and form of the metropolitan system of which any neighborhood is only a small part.

Accordingly, by "windfall" gains and losses we mean changes in locational values other than those that can be explained by a normal evolutionary process or by special events or development of metropolitan-wide significance (as, in our study, the growth of a secondary CBD in Clayton). In Part Two,we described a statistical method for estimating site rent differentials by neighborhood and how these value-differences can be explained in terms of housing-bundle components. The windfall factors are those that result from the internal working of the neighborhood transition process itself -- most typically, in our studies, the windfall losses associated with the various modes of passive downranking. Technically, there is no reason why such differentials could not in fact be calculated throughout an SMSA. In any event, it is entirely possible to establish such a concept as a working principle, even in the absence of detailed or exhaustive measurement.

In essence, a housing assignment and neighborhood transition process that avoided windfall gains and losses -- and still met the technically and socially more imperative goals indicated earlier -- can be regarded as providing reasonable assurance that people were getting what they paid for, in terms of the desirability of their housing and neighborhood, and the onus of the tax obligations associated with occupying a particular house. Aside from the inherent social equity in meeting this goal, it would also contribute strongly to individual families' capabilities for making secure forward plans for residential location or relocation choice, for reinvestment and for property maintainance decisions. Clearly, neighborhoods would still change over time; but it is desirable that they do so in response to changes in technology, the evolution of the metropolis and changing generalized preferences for different life style arrangements. These are changes which can be anticipated, even by individual families, and ordinarily with enough advance warning to assure adequate time for a repositioning of that family's personal residential strategy.

It should be noted that the elimination of windfalls would provide important advantages to all, except possibly very high-income families, and would cause these latter no disadvantage. Families would construct their own strategy in terms of their own preferences for neighborhoods, with different families similarly situated making somewhat different choices. But they would not have to worry about what would happen to the neighborhood of their choice -- be it the neighborhood they were moving to or staying in. Under normal circumstances they would have ample advance warning of situational change and time to adjust without crippling loss. Further, they would not have to go through the complicated process of trying to second-guess what everyone else was going to do in the near-term future. For upper-middle income families this could be an important benefit. For lower-

middle income or the working poor,it could spell the difference between an ability to make a viable long-run personal as well as financial commitment as opposed to being wiped out by the fickle winds of a neighborhood transition substantially out of control. As of now, probably a majority of families in large urban areas feel that in making one of the most important family decisions of their life,they are subjected to being sandbagged by an invisible player called "The Future of the Neighborhood". It is important to realize that the invisible player is real, but that he did not emerge out of nature. He was created by policy format that imposes ineluctable roles on the the other players. It is time that we thought of a new policy game that can meet the goals and objectives outlined above.

3. The Need for a Two Direction Policy

The key to understanding why an effective policy for neighborhood conservation must move in two directions at one time lies in a simple but very troublesome economic paradox. The way economic markets normally are expected to work is that when a commodity is in excess supply its price falls and the supply shrinks until a new equilibrium price is established, dependent on the long-run supply condition outside the market that effects either supply or demand. But there is at least one very important commodity that seems to have been in excess supply for close to a decade -- at least in St. Louis -- while the market forces themselves keep resulting in more and more of it being produced. The commodity is low-quality housing. The way this commodity is produced, of course, is mainly the deterioration of better housing through failure of owners to maintain and/or invest at critical points in the structural life-cycle.

filtering down could be added to those of Improvement, thus giving us even more improvement for our money than could be achieved by focusing on improving the core city alone. The problem is not that filtering has not worked; quite the contrary, it has worked at a level of overkill. By feeding on itself, it has set tens of thousands of dwelling units on a path leading to a point where there is zero demand for them even at near-zero price. It has committed dozens of neighborhoods to a path leading to their being regarded as uninhabitable by virtually everyone, regardless of race, creed, color or economic circumstances.

Improvement without Containment thus should be seen as counter-productive of its own purposes. On the other hand, Containment alone -- for example occupancy ordinances on a metropolitan basis -- imposes harsher conditions on the very poor by excluding them. But Containment coupled with a policy of Improvement could lead to more effective results in terms important to the poor themselves.

To achieve the mixing of rich and poor at a neighborhood level remains problematic, even in a Containment-Improvement strategy -- a problem we will confront directly in the next section. In the remainder of this section, we will discuss policies of Containment and Improvement in the context of the goals outlined in the preceding section.

Before turning specifically to identifying policy possibilities, perhaps at least some very brief comments should be directed at a counter and popularly held view of what is causing the problem. This view would have the problem arising from a combination of the inherent drive for single-family detached, low density, suburban housing by the middle class, coupled with an unwillingness to respect or to take care of property by the poor, especially blacks. Obviously, we have

no simple way of proving that middle class families have no special liking for suburbia; in fact, it is apparent that many of them do. But the fact remains that they have not had to pay much (more typically have saved) for that choice, and that most sensible people in middle-income brackets would have made such a choice on economic grounds alone even if they were indifferent to a suburban life-style, given the way the housing market and its financing have been organized. On the other hand, while we concede that housing maintainance is very poor in areas of poverty, especially of black poverty, it would seem clear from our research that no one -- rich or poor, black or white -- acting rationally would take the trouble or spend the money to maintain poverty housing any better, given the steady flow of low-cost housing alternatives constantly filtering down. The facts are that we have made the suburban housing bundle cheap and then tried to believe that a desire for suburbia was imbedded in the genes of the middle class. We have presented the poor with a Mad Hatter's tea party and then been outraged when they haven't washed the dishes.

4. Achieving Containment

As indicated, we are not in a position to assert definitively what ought to be done. Nevertheless, our research does point to a number of possible ways of achieving Containment.

The most obvious policy would seem to be a shift in the relative attractiveness of financing for renovation and maintenance as opposed to that for new construction -- in short, a reversal of subsidy. This could easily be achieved merely by altering the provisions for repair and modernization -- that is, the terms of downpayments, loan periods, rates, and guarantees or insurance provisions -- if

necessary, at the expense of new construction mortgages. (Some relief could even be provided by switching from fixed- to variable-rate interest mortgages within the present system).

Clearly, such a policy would not be attractive to suburban developers and would probably also be opposed by building-trades unions, who would have to reorganize their work assignments and contract bargaining agreements. But it could not soundly be argued that such a shift would decimate construction employment, since at least the same amount of "building" could be done, though in a somewhat different mode. In fact, with the present day technology, renovation and repair are now almost certainly more labor-intensive than new construction. Also, the shift could be effected over a period of time to accommodate a comfortably gradual reassignment of the construction work force. Nothing in this kind of policy would specifically restrict or limit new construction in suburbs. If families truly want such housing they certainly could buy it, but at full-cost of construction, financing, and road and utility extension. For too long we have conferred indirect subsidies on the suburban homeowner in the belief that he was bestowing a social benefit on society by making his prior house available to filter down to those less fortunate.

In addition to removing some of the cost disadvantage of staying in "the old neighborhood," it would also be extremely helpful to remove some of the uncertainty of doing so as well. A fairly modest way of doing this would be to provide for the orderly reuse and reassignment of housing units going into default. One possible approach would simply be to have FHA dispose of defaulted properties in sizeable blocks to private re-use developers; in fact, some small experiments along these lines presently are planned by HUD. However, while that would do

some good, the effectiveness of this approach is likely to be limited. Unless done at quite large scale, so that non-structural attributes could be taken care of as well, the risk to a private developer could be high and the potential profits fairly low.

A more effective, though clearly more controversial approach, would simply be to expand the powers of FHA to allow them to not only hold, renovate, and resell, but also to indefinitely operate as rental units, any housing coming into their possession by default. The effectiveness of this kind of approach could be still further expanded by empowering FHA to expend housing investment monies for non-structural elements, mainly public or social services.

Yet greater reduction of uncertainty could come from the establishment of price floors in target neighborhoods (or perhaps in all neighborhoods with average age of housing above 25, 30 or 40 years) whereby owners would be assured of repurchase by FHA itself at some very large fraction of original cost, plus price-level correction less the cost of restoring the unit to originally sound condition at time of sale. With such protection placed only at a floor level and applied on a widespread basis, it should not be expected that the actual flow of properties into FHA ownership would be very significant in the aggregate, though obviously it could be quite large in a few small neighborhoods at any given time.

All of the foregoing could really only be achieved at a federal level, due to the geographic fluidity of the residential capital market. For political reasons, moreover, most of these kinds of policies would have to be applied nation-wide. On the other hand, price floor or reuse policies, while they would probably have to be national in scope due to their need for rather large revolving funds,

certainly could be applied in a highly selective way, either by metro area, class of property, or even type of neighborhood.

At the State level there is a closely related policy alternative that could very importantly reenforce the kinds of policies cited above, or to a certain extent could even substitute for them. We refer to what could be called "development-zone zoning". Something similar is commonly practiced in Britain and most countries of West Europe; in the United States, only Hawaii even approaches its realization. The basic idea is the enactment of a single zoning ordinance over an entire metro area and its hinterland in which there are only two categories of land use; "for development" (urban) and "not for development" (rural). Where it is decided that urban development can be allowed, it is assumed that assignment of development within the allowable area requires little if any zoning control. Beyond public safety and anti-nuisance provisions, developers essentially are allowed to build pretty much what they want, where they want. In rural areas, or areas not designated for development, the law essentially precludes building anything except structures for strictly rural, roadside or temporary use. Clearly this is a very powerful mechanism for containment. However, since it regulates the territory <u>not to be settled</u> as well as that to be settled, it can be administered only at a level of jurisdiction above that of a single metro area. Administration at a state level would seem eminently practical, even where metro areas straddle state boundaries.

One problem with this technique is that considerable wisdom is needed to estimate the proper timing for bringing rural land into the "development zone". If too slow, it could put needless pressure on expansion, resulting in huge windfalls to landowners in the development zone. If too fast, it could promote wasteful scattering and defeat the goal of containment. There is also the

question of which groups of landowners' land will be given development status. More effective land and capital-gains taxation would simplify many of these problems, though we recognize that on political grounds such tax changes would be highly controversial. In any event, zoning systems that in any measure embody these principles could be of substantial help, and at least some steps in this direction would appear to be both politically possible and administratively practical.

Local governments can also contribute to Containment through their policies, though it must be conceded that without some of the more powerful measures at higher levels of government discussed above, what local governments could do alone would be severely limited in its effectiveness. One important local policy option is strict housing code enforcement. Simple logic would have it that if you make it illegal for a building to become unsound, then there can be no unsound buildings and hence no deteriorating neighborhoods. There are two flaws in this argument. First, neighborhoods can deteriorate without the presence of structural decline, at least initially. Second, it simply ignores the problem of what happens to dwelling units occupied by families who do not have the capacity to pay for "standard" housing. In a particular neighborhood, this can be taken care of by coupling code enforcement to an occupancy permit system, essentially excluding families who could not use the property in a way consistent with its continued maintainance. In essence, this involves excluding those too poor to afford the neighborhood.

But large-scale application of the code enforcement, under existing conditions, could only intensify the relocation cycle. A gradual imposition of the housing ordinances in a sequence across a metro area would only cause the slums to move from one neighborhood to another more rapidly, while to impose them simultaneously in a blanket way, overall, would simply mean that the poor would have to move out of the area entirely. If, however, the housing-ordinance technique were coupled with a serious effort at improvement of housing for the poor, it could provide a powerfully effective way of sustaining the soundness of neighborhoods and of slowing runaway neighborhood transition to a paced, orderly process of change. The effectiveness of this device would be yet greater if it were accompanied by a significant reordering of financing terms for reinvestment as opposed to new construction.

The local government planning function could also be brought to bear more directly on Containment. Specifically, rearrangement of street patterns to prevent traffic through small areas has had salutary effect on property values and maintainance incentives.* Where street ownership is actually conveyed to the holders of the fronting property, they can more easily close one end to provide limited access, and then the effects are yet more salutary. Finally, taking particular care in the placement of major public land-uses to maximize their buffering effect would help. This would include the siting of expressways, parks and cemeteries, and in some cases zones of light industry.

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*For a discussion of "enclosure" and "privatizing" see Oscar Newman, "The Privatization of Streets in St. Louis: Its Effect on Crime and Community Stability," (unpublished).

The foregoing suggests that much can be done at all levels of government to achieve Containment, especially if the policies of the several jurisdictions can be sensibly coordinated. We must emphasize once again, however, that while possibly effective in a narrow sense, policies aimed at Containment alone are not likely to prove very satisfactory unless accompanied by strong and serious efforts at Improvement of what is contained.

5. Achieving Improvement

The range of policies discussed under Containment in large part would promote the continued maintainance and periodic reinvestment needed in neighborhoods occupied by families having the ability to pay for sound housing. Now we must discuss policies for Improvement of housing for those families lacking this ability. It is in our experience with this problem that we can see most clearly the limitations of the "four-walls fixation". The first lesson, then, is that policies for housing for the poor must be much more concerned with non-structural elements of the housing bundle. We will discuss this presently, but first some comments on the management of the structural components themselves.

Much has been made of problems stemming from "design mistakes" of public housing -- as with the repeated point that Pruitt-Igoe was doomed to failure because it was high-rise, with skip-stop elevators. While we claim no particular expertise in these matters, we can point out that many high-rise projects are obviously successful, while examples of failure can as easily be found in low-rise, smaller-scale projects. What appears to make the difference -- though further study is surely need on this point -- is the availability of viable, non-public housing alternatives for the poor. Specifically, in very loose housing

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markets like St. Louis, public housing has had trouble competing. In tighter markets -- as, say, Chicago -- higher occupancy and maintenance of public units appear more feasible. The likely explanation is that the poor, like everyone else, prefer a better neighborhood ambiance and choose it when they have the opportunity: they opt for the non-institutional environment. Clearly, penning up the poor in public ghettos is not what we have in mind as a satisfactory outcome. At the same time, we must recognize the hard fact that the pattern of escape from the projects, at least in St. Louis, has not proved effective for the poor themselves, and that they too -- like the middle class who continually feed the surplus of devalued housing -- are forced into participation in the destructive cycle of decay and abandonment. In short, we must recognize that these roles are determined by a system that grows out of policies.

Accordingly, one thrust toward Improvement is to make the environments of public housing attractive enough <u>in total terms</u> so that the poor can think of them as viable long-term locations -- at least so long as they remain too poor to afford standard private housing. In addition, to the extent that public resources are available, subsidized alternatives to large-scale project housing should be implemented, if solely on the humanitarian grounds of giving the poor some element of choice in their lives.

But if project housing for the poor has been unsatisfactory, the history of providing subsidized individual units is even more dismal -- not necessarily, we submit, because the concept per se is unrealistic. It is commonly believed that the failure of Sec. 235 programs (providing for subsidized home ownership by the poor) was due to the inherent inability of the poor to cope with home-ownership coupled with the congenital chicanery of real estate dealers operating in that segment of the market. We cannot disprove either of these hypotheses; but we are suspicious of them as primary causes of program failure. In

particular, to require that families of meager and uncertain income spend a full 25% of their income for debt amortization and taxes alone is to court foreclosure. If, in addition, such families have very thin equities and are placed in deteriorated housing that requires high maintainance, we must not be surprised when foreclosure in fact ensues. In Tables 21 and 22 of this report we have presented evidence of this unfortunate sequel.

We think it very likely that the major problem with the 235 program was that the level of subsidy was too low and the imposed conditions of home ownership somewhat too severe for the families involved. We think it should be tried again, at least experimentally, but with some modifications. First, subsidies should allow families to cover maintainance as well as other costs out of something less than 25% of their income. Second, it would probably help considerably if their purchase could be on something like a land-contract basis, with FHA or a local housing authority retaining title until more than a nominal equity had been achieved, and having the power to evict or relocate really troublesome tenants rather quickly and without the complications of formal foreclosure. Schools of instruction in techniques of home ownership have been proposed by some for new householders under Section 235. Also, inspections and periodic competitions in home maintenance and improvement might prove highly effective.

Another technique for achieving better housing for the poor lies in subsidizing their ability to pay without trying to provide specific housing units. Experiments in this approach are now being conducted with federal financing in Green Bay and South Bend, whereby any family -- renter or owner -- is eligible for a subsidy in the amount of the excess of the cost of housing over 25% of their income, provided only that they actually live in sound housing. The intent,

of course, is to see whether -- largely through better maintainance -- the private market will produce sound housing for the poor once they have the ability to pay for it, contingent of course, on their actually occupying it. If successful, this approach clearly could supplement or entirely replace the kind of directly subsidized ownership programs attempted to date.

Finally, urban homesteading has also been suggested, and some initial experimentation is underway. Essentially, this device would provide for free conveyance of an abandoned property in the central city to any householder who will bring it up to sound condition and occupy it for a given minimum period. By itself, we find it doubtful that such a program could have much effect. The very poor clearly cannot afford the necessary reinvestment, while the neighborhoods in which such housing is normally found are unattractive to those who can afford it. Moreover, the subsidy involved is not impressive, amounting essentially to no more than the market value of the property in its abandoned state. In St. Louis at least, this is likely to be as little as a few hundred dollars and certainly not more than a few thousand. On the other hand, coupled with a more effective overall Improvement program, in the context of Containment, and with a real effort to foster the non-structural elements of the housing bundle, this could become an extremely useful policy device.

Dealing with the non-structural elements of an Improvement thrust may prove more frustrating since it is the quality of the neighborhood itself that must be upgraded, mainly as measured by the incomes of the families in it and the quality of public services available. The first of these, short of massive subsidies, are likely to be politically acceptable, can be significantly bettered only by

greater labor force participation and employment success. Public services can be achieved only by making more funds available to impoverished central city local governments, primarily for education and health, to a lesser extent for neighborhood facilities. The research for this report focused mainly on housing, though in its broadest sense, so we are not prepared to make "new" suggestions for policies to improve the labor market or the financial capabilities of local government. What we do wish to emphasize, however, is that such policies must be incorporated in an integral way with housing policies if neighborhood conservation is to be achieved and the decay-abandonment cycle interrupted. Indeed, while we have made no systematic study of neighborhood development corporations, at least casual observation suggests that their priorities — jobs, services, housing, in that order -- are entirely consistent with this view. If this kind of broad policy synthesis could be achieved, it might be possible to provide vastly better situations for the poor — in which they would freely choose to stay — than those in the areas to which they are now "escaping". In that way then, our two-pronged Containment-Improvement policy thrust would come full circle, with Improvement actually reenforcing Containment, as well as the reverse.

6. Integration as a Specific Issue

Early in this part of the report, we strongly indicated our acceptance of strictly enforced "open housing" laws as a necessary part of a justifiable policy package. We have no intention of qualifying that position. At the same time, we have avoided the issue of just how much integration -- by race or class -- would actually be achieved by an open housing policy.

At least as we interpret them, the results of our research lead to a somewhat surprising conclusion on this point, namely that achieving racial integration may be substantially easier than achieving integration by economic class at a neighborhood level. Our studies of the determinants of property value differentials and the options exercised by moving families appear highly consistent with the view that "We don't care if blacks move in as long as they are 'decent'", does in fact reflect the dominant view among most whites. Surprisingly, though, at any given level of income it also reflects the attitude of blacks. Moreover, from the University City experience we see that effective racial integration can be achieved without devastating declines in property values, without a collapse of public services and without significant decay and abandonment.

But two problems remain in regard to achieving widespread racial integration. First, it is possible that while neither blacks nor whites have aversion to 'decent' neighbors of the other race, either or both might prefer to live in neighborhoods where their race is a majority. If only whites prefer this, then we could have a combination of neighborhoods, some with significant black minorities and some virtually all black; but it would be very difficult to achieve more. If both races prefer majority status, however, racial integration might be virtually unobtainable at a neighborhood level; but under these circumstances the resultant segregation would be by mutual preference and not necessarily a problem.

A far more serious barrier to achieving racial integration in neighborhoods is posed by the far greater incidence of low income and poverty among black families than among white families. Overcoming this barrier would require either obtaining substantially equivalent size distributions of income for black and white famili

achieving integration by economic class itself at the neighborhood level. Our suspicions are that the former, even though it may pose a longer and more tortured path, may yet be the more achievable.

Why must economic class integration -- even with racial complications -- be viewed as so difficult to achieve? For decades, the literature on city planning and urban design has extolled the virtues of an urban form whereby people of all classes, races, tastes and opinions could live together in harmony at a neighborhood scale. Indeed, achieving this objective was the central focus of the plan for the entire community of Reston, Virginia, and to some extent of Columbia, Maryland. In neither case has the objective been achieved very effectively. While our research can hardly be regarded as the final word on the subject, it strongly indicates that except for the genuinely poor, all people -- white and black, rich and not so rich -- are willing to pay, and substantially, to avoid class integration. This should hardly surprise us. Rising above humble origins to "make it" in a new and better neighborhood is central to our societal tradition. While not wishing to pass judgement on it, we must acknowledge that tradition and we do not seek policies to destroy it. At the same time, while still humane, our policies must be designed to keep the thrust of upward mobility from destroying our urban environments, which in turn can frustrate the benefits of the upward mobility itself.

It is our view that a two-pronged Containment-Improvement attack coupled with sensible strategies for job improvement for the poor and fiscal improvement for the cental city could channel the drives of all Americans for social and economic betterment into vastly less destructive channels.

Still, even here there may be a nagging residual problem. If we concentrate heavily on upgrading job success for poor blacks in particular, as opposed simply to poor people in general, we are likely to converge on racially integrated -- though still class-segregated — neighborhoods about as fast as could be expected. But, even though poverty has heavier incidence among blacks than whites, in absolute numbers there are more poor whites than blacks. It is not likely to be politically acceptable that poor whites should be asked to wait for special attention until a large number of blacks have been upgraded, even though to do so might in one sense be considered "fair."

On the other hand, if we address the problem of upgrading those in poverty without respect to race and are equally successful with both races, then blacks will continue to be overrepresented in poverty areas until such areas are eliminated. Accordingly, de facto segregation will continue as a consequence of economic disadvantage, even though racial aversion itself disappears. Clearly, some sensible compromise must be settled on in this regard.

We are aware that the foregoing will be regarded as unsatisfactory to some. There surely are those who find unacceptable any solution that does not lead, fairly quickly to the realization of race and class integration at a neighborhood level. We feel constrained to point out, however, that it will be difficult to achieve a significant measure of class integration on any near-term basis. It would seem to require either really massive subsidies (including bribing the middle class to live near the poor) or the use of undesirably stringent police powers to enforce housing assignments. Perhaps it would be worth doing. But before making any massive commitment to it, some additional research would seem called for. Specifically, it would appear crucial to try to obtain direct evidence on just how important class integration is to people, and to what groups it is important.

Certainly we know that poor people are dissatisfied with their neighborhoods and would like to afford a better one. But they are probably dissatisfied with most aspects of their lives, and the real question is how much benefit they would realize merely by transferring to a new location with fewer poor families if their income, housing, and all other attributes of their lives remained the same. And how lasting would any benefits be, even for the poor, if the middle class could be kept in those neighborhoods only by bribe or coercion?

As indicated above, the inadequate housing of the poor are probably due more to their low income than to a failure of the housing market as such. Our attempts to make things better for the poor mainly by manipulating housing structures in their neighborhoods has afforded them little good, has unleased a dynamic of destruction and has not achieved much integration into the bargain. By following a Containment-Improvement-Jobs-Services strategy, we may well produce more integration than by an explicitly one-dimensional integration policy itself. To do so, however, will require a true synthesis of policy, covering more elements than ordinarily considered, as well as the analysis of more complex possibilities.

It also will require the recognition that some goals may be better approached indirectly than directly, and that other goals — we hope it will be the less critical ones -- may have to be abandoned, or at least postponed. In some ways, economics is the study of "why we can't have everything" -- which may be why, adopting Ruskin's comment, some still call it the "dismal science". Still, we hope that the research we have done and the suggestions we have presented in this report will help people of all races and classes to achieve more rather than less in the way of urban living conditions they may regard as enduringly viable.

* * * * *

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